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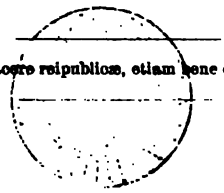
THE

NATIONAL

QUARTERLY REVIEW.

EDITED BY

EDWARD I. SEARS, LL.D.



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THE

NATIONAL QUARTERLY REVIEW.

NO. XLIII.

DECEMBER, 1870.

ART. I.—1. *Lives of the most Eminent Painters, Sculptors, and Architects.* By GEORGIO VASARI; from the tenth Italian edition of 1832–38. ("*Vite de 'piu excellenti Pittori, Scultori, e Architetti.*"*) London. 1839.

2. *Dictionnaire Historique des Peintres de toutes les Ecoles.* Par ADOLPHE SIRET. Bruxelles et Leipzig. 1848.

3. *The Hand-book of Painting, of the German, Flemish, and Dutch Schools, based on the Hand-book of* F. F. KUGLER. Enlarged and re-written by Dr. WAAGEN, Director of the Royal Gallery of Pictures at Berlin. 2 vols. London. 1860.

4. *Anecdotes of Painting in England, with some account of the principal Artists.* By the Hon. HORACE WALPOLE, with additions by the Rev. JAMES DALLOWAY. 3 vols. Printed at the Shakspeare Press. London. 1828.

THE voluminous records of Art, scattered through different languages and countries, and in many instances withheld from general examination with jealous care, although of inestimable

* This work was published by the author at Florence, in 1550, and again in 1568, with portraits and additions, down to 1567. It is the text-book of Italian Art, and upon it are based most of the kindred works of more recent dates; its editions and translations are numerous.

value to scholars, are seldom attainable by the desultory reader; he lacks not only time and opportunity, but often inclination to pursue with profit the study of works essential to an intelligent comprehension of the subject of his thoughts. Therefore, his requirements are best supplied by the writer who presents the essence of those particulars which afford a fair representation of the subject.

Although our title may not suggest any names of exceedingly great fame or genius, or evoke the images of the masterpieces of the pictorial world, still we shall be able to show that, in all ages, women have been jealous worshippers at the shrine of art, and have in many instances been touched with the divine fire of inspiration. We shall consider our artists and their works, but necessarily briefly, in a national order of chronology, for they have been neither sufficiently numerous nor distinctive in manner to have established methods or schools of art; but we trust that the comparative paucity of materials which we have collected with much patience will not detract from the interest of our subject. We cannot admit the harsh ultimatum of Bellori, that mediocrity is no more admissible in art than in poetry; it would be as wise to banish violets from our gardens because roses bloom more gloriously. Every conscientious embodiment of the artistic idea must possess some degree of merit, and this degree will always be allowed by the impartial critic. To pronounce with justice upon the status of an artist, we must give due attention to design, which is the soul of the work, and not rest our decision upon the quality of its execution; an acquirement at best. Progress in art must necessarily depend more or less upon the social and intellectual life of the artist; moderate degrees of genius flourish in accordance with surrounding influences, and are liable to depression from adverse circumstances which would serve only to invigorate its nobler developments. For this reason we must base our criticisms upon the obstacles of seclusion and feminine weakness, as well as upon the instruction and opportunities of study which they

enjoyed. In some instances we shall find them the best pupils of their masters, rendering their different styles with purity and finish.

Art has always been a favorite pursuit with women, and this is doubtless owing in a great measure to the fact that its practice does not necessarily withdraw them from their natural sphere. Giorgio Vasari says, in his life of Properzia de'Rossi, that it is a remarkable fact that, whenever women have at any time devoted themselves to the study of any art, or the exercise of any talent, they have for the most part acquitted themselves well, and have even frequently acquired fame and distinction.*

Before introducing to our readers the most meritorious female artists of the period which our article embraces, we will glance briefly at the general state of art down to the time of our first sketch. Sculpture, and outlines drawn upon colored stone surfaces, were practised early by the Phœnicians and Egyptians; and the pencil in coloring was employed by the Greeks. We are told that Belus, the son of Nimrod, caused a statue for idolatrous worship to be made about two hundred years after the Deluge. His relative Semiramis, queen of Babylon, placed figures in bronze among her new edifices. The Hebrews learned the art of casting metals from the Egyptians, and first exercised it in the manufacture of the golden calf; this art, as we are informed, was afterwards practised by them under divine command.† Diodorus affirms that the Egyptians received their knowledge of sculpture from the Ethiopians, and in their turn imparted it to the Greeks, who perfected it. Drawing from nature, according to Pliny, originated with Gyges of Lydia; Cleophomtes filled in the

* We would suggest to some of the violent partisans of Women's Rights in this age, that women have generally been conceded a pretty correct position in art, literature, or any of the liberal sciences in which they could, by their gifts or abilities, claim a place; we ask these social regenerators to reflect whether a moral may not be deduced from our proposition for them, to do more and talk less, in order to establish their sex in the position which its most worthy and intelligent members desire.

† See *Exodus*, c. xxxii., where Bezaleel was appointed to fashion the golden cherubim and sacred vessels.

outlines with color; and Apollodonis perfected the art of pencilling, and the reproduction of light and shade. The names of Phidias and Praxiteles need only be mentioned in order to recall Greek excellence in sculpture. Among the Romans slaves were forbidden to practise the arts in cities, but if they became successful in their pursuit, were made free; and national honor was paid to eminent artists. We have received, through sources which are scarcely more than traditionary, accounts of several female painters among the early Greeks and Romans; the graceful story of the daughter of Dibutades, who drew the outline of her lover's features upon the wall by the light reflected from a brasier, as they sat together the night before his departure from her country; Timarta, whose picture of the goddess Diana Pliny saw at Ephesus; Helma, whose Darius conquered by Alexander, formed the subject of a mosaic found at Pompeii; and Laia, who painted ivory miniatures at Rome about one hundred years before the Christian era.

The barbarians who ravaged the empire destroyed many of the finest works of ancient art, while they seem to have spared architecture to a certain extent, probably because they found it too substantial for their means of destruction; but the practice of the arts had declined before their coming, for in the church of St. John Lateran, erected by Constantine, the figures of Christ and the apostles were of an inferior order of merit. When Constantine removed the seat of empire to Byzantium, he took with him all the best painters and sculptors of his time.

Infinitely more injurious to art than all the ruin inflicted by the barbarians was the jealous fury of the early Christians; it spared no form of painted or sculptured beauty of the mythological world, or triumph of heathen architecture which its powers could reach; and the wreck was completed by Constans II. The noblest embodiments of genius were lost for a time; indeed, it would seem as if those which have reached us had been preserved by destruction, for they were found in the

midst of and beneath ruins, sheltered from complete annihilation by the accumulated fragments of temples and palaces which had fallen upon them. It is to the painters of the intermediate period which followed that we are indebted for the absurd and grotesque forms of art which people the few succeeding centuries. About the beginning of the eleventh century architecture began to return to the beauty and unity of the antique style; in the following centuries the purer type was gradually restored, and to this period we trace some of the most celebrated churches of Italy. The Latin conquest of Byzantium in 1204, and the subsequent intercourse between the Greeks and Italians, seem to have promoted the revival of art, for schools were soon established at Venice, Siena, Pisa, and Florence. The Florentine school of art takes precedence in time and distinction, partly owing to its minute and elaborate history by Vasari. At the time of Giotto, in the fifteenth century, it had abandoned conventionalism for nature; and under Masaccio its individuality became marked, and perspective received attention. About 1450 painting in oils was successfully practised by Antonello da Messina, who had learned the secret from the Van Eycks, and also by his pupil Domenico Veneziano in 1460–70. In the sixteenth century local coloring, dramatic composition, ideality of form, and the correct transitions of light and shade were carefully studied. From these combinations we have the development of painting in its essential principles. At this epoch lived Lionardo da Vinci, Michael Angelo Buonarroti, Raffælo, and Fra Bartolommeo. About 1497 the crusade of Savonaola against nude figures in art caused the destruction of many fine works, and the fanaticism had a most pernicious effect. In May, 1498, Savonaola was strangled by the opposite religious party, and the ill effect his preaching had produced on art gradually wore away. About the beginning of the sixteenth century Italian art was in a flourishing condition, and the influence of the then existing styles has always attended its successive ages. At this period there were paintresses and sculptresses of no small degree of merit.

The foremost of these was Properzia de 'Rossi, who was born at Bologna in the year 1501. Vasari calls her "a maiden of rich gifts, who was equally excellent with others in the disposition of household matters, while she gained a point of distinction in many sciences well calculated to awaken the envy, not of women only, but of men also." She was remarkably beautiful, a proficient in music, and an inspired singer. Her first artistic effort was the carving of peach stones, a work demanding extraordinary skill and patience, and producing marvellous effects. The Crucifixion, comprising a vast number of figures, all delicately treated and admirably arranged, carved upon a single peach stone, must indeed have been a complicated and wonderful work. Of these stones not one well authenticated specimen exists at the present day. There is however, a cherry stone, preserved in the cabinet of gems at Florence, representing no less than sixty heads carved with minute care, which is said to be the work of this artist. Of her marbles there are many fine specimens extant; her first bust, that of the Count Guido de 'Pepoli, which obtained for her the commission for the marble figures in basreliefs on the gates of the façade of the church of San Petronio, is now placed over a door in the interior of that building. The subject of the sculptures is the flight of Joseph from Potiphar's wife; the detaining gesture of the female figure is characterized by inexpressible grace and beauty. The artist is said to have given vent to the agony of a hopeless love in this beautiful work. There were other of her productions in the same church, from among which may be selected for excellence the figures of two angels in the chapel that contains Tribolo's Assumption of the Virgin. The Madonna de 'Rossi also engraved on copper, and executed some fine pen drawings; of the latter style of art Vasari preserved some copies from Raffælo. Her fame extended throughout Italy, and Clement VII. sent for her to visit him after the coronation of the Emperor Charles V. in 1530; but the unhappy woman had recently died. She was buried in the *Spedale della Morte.*

Her countrymen esteemed her as one of the greatest wonders of nature; nor are admirers wanting in later ages. Siret says of her, that she cultivated "tous les arts, et fut douée des tous les talents et de toutes les graces; morte, par suite d'un chagrin d'amour, à fleur de son âge. Sculpteur célèbre; graveur; dessinateur; cultiva l'architecture et la perspective."*

Sister Plantilla Nelli, a nun of the Dominican convent of Santa Caterina, on the Piazza di San Marco, at Florence, was born in 1523. She was the follower in art of Fra Bartolommeo, and the contemporary of Andrea Vannuchi, called Del Sarto, after whose design she painted a Descent from the Cross; this picture was preserved in her convent in Lanzi's time. The convent was suppressed in 1812, and its buildings attached to the Academy of Fine Arts; the refectory of the convent is now the library of the academy, and in it is preserved the Last Supper, by Sister Plantilla. An Epiphany, with figures after the ancient method, and a landscape which would reflect credit on the modern school, was also among her accredited works. In the choir of Santa Lucia, at Pistoja, Vasari places a large picture of the Madonna and Child surrounded by seven saints; and he mentions another large painting sent abroad by the director of the hospital at Lelmo. An inferior copy of the Adoration of the Magi hangs in the corridor which connects the Pitti Palace with the Uffigj. Her family preserved a large Crucifixion, composed of many figures, after the manner of Ceeclim del Frate, a pupil of Fra Bartolommeo. Her style was careful and highly finished, and a fair imitation of Frate, whose method was to design first the naked figure and afterwards to drape it with strict attention to chiaro-scuro. Sister Plantilla possessed a considerable number of drawings in chiaro-scuro by Fra Bartolommeo; some

* We subjoin her epitaph in the original:

"Si quantum naturæ, artique Propertia, tantum
Fortunæ debeat muneribusque virum
Quæ nunc mersa jacet tenebris ingloria laude
Aequasset celebres marmoris artifices.
Attamen ingenio vivido quod posset et arte
Fæminea ostendunt marmora sculpta manu."

of which are in the Florentine gallery; others of more doubtful descent were said to have been rescued from destruction in the convent after the sister's death, and sold to the grand duke of Tuscany; from the Tuscan collection they were brought to England, and owned by Sir Benjamin West; after his death they became the property of Sir Thomas Laurence, and subsequently reached the collection of the King of Holland. Some pictures in Berlin, said to be the sister's work, are distinguished by depth and purity and careful execution. She died in 1588.

Sofonisba Anguisciola, the most gifted member of an artistic family, was born at Cremona about the year 1530. She received instruction from Benardino Campi, and became one of his best pupils; after he left Cremona she continued her studies under Soiaro. She attained such a degree of perfection as to be esteemed one of the finest artists of her age. Lanzi and Vasari commend her in the highest manner; and Van Dyck says that he received from her conversation more information and knowledge of art than from any of his studies. She was court painter to Philip II. of Spain, and took portraits of Pius IV.* and nearly all the royal and prominent personages of the period. She married twice, and died at Genoa

* We subjoin the following letters between Sofonisba and Pius IV., to show the estimation in which she was held by her cotemporaries:

No. 1. "Holy Father: From the Most Reverend Nunzio of your Holiness I understand that you desire to have from my hand the portrait of her Majesty the Queen my mistress. Now as I consider the commission a singular grace and favour, having to serve your Holiness, I have requested permission from her Majesty, who willingly granted the same, perceiving in this wish a proof of the paternal affection which your Holiness bears to her Majesty; I send therefore the portrait by the occasion afforded to me by this cavalier, and if in that painting I shall be found to have satisfied the wish of your Holiness, I shall find infinite comfort in the knowledge thereof; but I will not omit to say that if the beauties of mind possessed by this most illustrious Queen could also be represented by the pencil to the eyes of your Holiness, you could see nothing more admirable. As respects the delineation of those features which may be portrayed by art, I have not failed to use all the care which I could command, to the end that your Holiness might behold them in truth.

"And with this conclusion I kiss the most holy feet with all reverence and humility.

"From Madrid on the 16th of September, 1561.

"The most humble servant of your Holiness,

"SOFONISBA ANGUISCIOLA."

No. 2. "Pope Pius IV.—*Dilecta in Christo filia.*

in 1620, at the advanced age of ninety years, infirm and blind through too close application to her art. A portrait by herself was in the ducal gallery at Florence, and another in the possession of the Lomellini family at Genoa in Lanzi's time. At the present period there is one at Althorpe, England, which shows a pleasing face and regular features, olive complexion, large black eyes and dark hair, and a finely-formed, graceful head. The marriage of St. Catherine is preserved at Wilton, England. The artist's style was free and graceful, her coloring clear, and her portraitures life-like. Vasari placed in his collection of drawings by the "*excellenti pittori*," a sketch by her of a girl laughing at the terror and confusion of a boy whose hand is caught in a lobster's claw.

Irene di Spilimbergo, pupil of Titian, who was born at Udina in 1540, is mentioned by Rudolphi as a good artist and an accomplished woman. She died in 1559, just as she was beginning to exercise her art in a manner highly creditable to herself and her master. There are said to be three of her pictures in the Casa Maniago, of rich and harmonious coloring, but of imperfect design. Lanzi says of her Bacchanals at Monte Albodo: "The drawing is careless, but the coloring is worthy of the best age of art. We see the reflected rays of her great master's glory; the soft yet rapid gradation of tint, the clear touches, the repeated applications of color which give a veiled transparency to the tone, the judicious grouping, the combined majesty and grace of the figures, all recall the genius of Titian." Tasso and the minor poets sang her charms and talents, and a collection of these eulogies was published at Venice twenty years after her death.

We have received the portrait of the most illustrious Queen of Spain, our dearest daughter, which you have sent us, and which has been most acceptable, as well on account of the person represented, whom we love paternally, for her piety and many pure qualities of her mind, to say nothing of other considerations, as because the work has by your hand been very well and diligently accomplished.

"We thank you for it, assuring you that we shall hold it among our most valued possessions, commending this your skill, which, albeit very wonderful, is nevertheless as we hear, the very smallest among the many gifts with which you are endowed.

"And with this conclusion we send you again our benediction. May our Lord have you in his keeping.

"Dat. Romae, die 15 Octobris, 1561."

Lavinia Fontana, a disciple of the Caracci, was born at Bologna in 1532; she was the daughter of Prospero Fontana, the painter of several altar-pieces at Bologna and Rome, and the instructor of the Caracci. Lavinia was a member of the Roman Academy, and her style of portraiture was highly in favor with the ladies whom she painted, on account of the elaboration of detail, which displayed to advantage their ornaments and jewels. Her style was soft and harmonious, and full of tender expression; and Mazzolari, describing a cabinet piece of the Holy Family, painted by her for the Escurial, says it is "a picture so vivid, so gay and graceful, and of such glorious coloring, so full of beauty, that one is never weary of admiring it." Lanzi commends her Sheba at the Throne of Solomon, which he saw in the collection of the Marchèse Zambeccari. There is a fine Venus in the museum at Berlin; and a Nativity of the Virgin, with a night effect, of rare merit, exhibited in her native city. She was esteemed by her contemporaries as a good artist and a virtuous woman. She died in 1614.

Marietta Tintoretto, or Robusti, was born in Venice in 1560. She was the pupil and companion of her father, Giacopo Tintoretto, and evinced an early genius for music as well as for art. Under her father's tuition she studied design, composition, and coloring, after antique models, and displayed a taste and skill which would have eminently qualified her for historical subjects, but she devoted herself to portraits; her first was that of Marco dei Vescovi, and it was the firm basis of her future fame. Her excellent manner was formed under her father's best instruction, and he was second only to Titian. She possessed an easy elegance of design, an admirable coloring, and a touch light, free, and spirited. Most of the nobility of Venice were painted by her; and she received invitations to the courts of the Emperor Maximilian, Philip II. of Spain, and the Arch-duke Ferdinand; but her father cherished for her such a tender affection that she would not consent to a separation from him. Several of her works are preserved in

Venice, and one in the Palais Royale at Paris; the latter is the picture of a male figure seated at a table, with books, papers, a crucifix, and a watch beside him. "Her exquisite taste, her soft and gentle touch, and her skill in coloring were remarkable both in works of her own invention and in those due to her father's genius." She died in 1590, and was buried in the church of Santa Maria dell' Orto.

Artemisia Gentileschi, the daughter of Orazio Lomi, was born in 1590. She far excelled her father in artistic skill and merit. She was improved in art by Guido Reni, and closely studied the works of Domenichino, but did not confine herself to these masters. Her style was powerful and vivid, exhibiting some startling effects, with great natural freedom and excellent finish. Her portraits were celebrated all over Europe, and her original pictures have attracted universal attention. A Judith slaying Holofernes, in Florence, is strongly colored, and treated in a manner to inspire awe in the beholder. A Susanna and the Elders, in the possession of the De Medici, is pleasing from its elegance and finish. Charles I. of England conferred high honors upon her and gave her several commissions; her David with the head of Goliath, and a female figure of Fame, both of great excellence, were among his collection. Her own portrait is at Hampton Court. Artemisia lived in great splendor at Naples, where she had formerly married Antonio Schiettesi, concerning whom she inquires in a letter to Del Pozzo, dated 1637, "*Si servita darmi nuova della vita o morte di mio marito;*" an inquiry certainly not very expressive of profound conjugal affection. Indeed, Graham, in his "English School," says she was as famous for her amours as for her art. She died in 1642.

Caterina Cantoni, who lived in 1591, wss greatly skilled in the art of embroidering after nature and paintings; she died young. A noble Milanese lady named Pellegrini, of about the same period, is called by Lanzi the Minerva of her age; she embroidered the vestments which were preserved in the great cathedral at Milan in 1787, and were considered curious specimens of art.

Arcangela Paladini was born in 1599; she excelled in music and embroidery, and had a charming voice; she lived at the court of Maria Magdalena, Arch-duchess of Austria, at Florence, and was greatly esteemed and admired. Her portrait by herself was hung in the ducal gallery, in the cabinet *de pittori*, in 1621; it remained there in Lanzi's time, and he observes that it was a great honor. He places her in the Florentine school of the seventeenth century. She died in 1622.

Laura Bernasconi, a flower painter, a follower of Mario Nuzzi della Penna, called De' Fiori, has many works in good Italian collections; but an error in the coloring, probably from the improper use of oils, gives them a black and injured appearance. She followed the Roman school of the early seventeenth century.

Aniella di Rosa, wife of Agostino Beltsamo, was born at Naples about 1613. She was the companion of her husband's labors, and they together painted many pictures which were finished by their teacher, Massimo, and sold as his own. Her original designs, and the praise bestowed upon her, prove her to have been an excellent artist; she united correct drawing and masterly grouping with elegance and grace, and soft transparent coloring. She was murdered by her husband in a fit of jealous rage in the year 1649.

Elizabetta Sirani was born at Bologna in 1638. She was an artist of great merit, and a faithful follower of Giudo's second manner; her execution was grand, her effect and relief powerful, and her style entirely free from the natural timidity of her sex. Her pictures were numerous, carefully elaborated, and singularly beautiful. Malvasia says that, according to her own register, she had completed over one hundred and fifty pictures, as well as some very fine etchings, before her sudden death. The Twelve Crucifixions, in the Cathedral of Piacenzia, were a marvel of her style. Her Christ at the River Jordan, her St. Anthony, and many other works were preserved in the Zambeccari and Caprara Palaces, and in the Corsini and Bolognetti collections at Rome; some small paint-

ings on copper at Bologna and Rome were extremely valuable. Her commissions from distinguished personages throughout Europe were innumerable, and her early and tragic fate alone prevented her from becoming the first artist of her age. She was as admirable in the homely ways of daily life as she was super-excellent in art, and her filial affection and feminine grace completed a character of almost ideal perfection. Her death was sudden, like that of Aniella di Rosa, having been poisoned, in 1665, by one of her own maids, instigated it is said by her rivals in art. Her remains were buried in the tomb of Guido Reni, in the chapel of the Madonna del Rosario, in the church of San Domenico.

Isabella del Pozzo's name was found by Lanzi's, about 1666, on a picture at San Franciso, of the Virgin and Saints, and he says that at that time there were few better artists at Turin. In 1676 she was appointed court painter to the Electress Adelaide of Bavaria. Giovanna Fratellini, who lived about this time, is mentioned by Lanzi as "an illustrious artist of the school of Gabiani." Pilkington says that her touch was light and free, her coloring natural, her draperies various and appropriate, and her pictures enriched by a judicious use of architectural drawing. Her portrait in the Florence Gallery represented her in the act of painting her favorite son and pupil Lorenzo, from the affliction of whose death she never recovered, and whom she did not long survive. She painted the portraits of Cosmo III. and his family in a large picture containing fourteen figures; its action was admirable, and its coloring rich and warm. She drew in crayon, and painted in oil and enamel, both in miniature and in life size. Dorathea Aromatari, who lived about 1660, according to Boschim, "produced with her needle all those beauties which the finest and most diligent artists exhibited with their pencils." Chiara, daughter of Varotari of Venice, a pupil of Paul Veronese, and founder of a flourishing school of art at Padua, is highly praised by Ridolfi for the beauty of her portraits; her own was placed in the collection of the grand duke of Tuscany

about the middle of the seventeenth century. She died full of years and honors about 1660. Guilia Cortese was born at Florence in 1670, and studied under Pietro and Livio Helma; she was eminent in miniature painting, which she learned from Galantini, and much admired for a pleasing natural coloring and the lively resemblance of her portraits.

Rosalba Carriera was born in 1675 at Venice; she was the pupil of Antonio Balestra, and learned the details of portraiture from her relative Pellegrini; she painted mostly in pastel, in which Zanetti says she attained the greatest perfection. Her pictures evinced much grace and beauty of coloring; and her accurate drawing, and soft, delicate touch, gave her portraits an expression of extreme fidelity to nature; she also excelled in the use of the crayon. She was elected member of the academies of Paris, Bologna, and Rome; the king of Denmark visited her at Venice, and her own collection of works was sold to Augustus III., king of Poland, at a high valuation. She was patronized by all the royalty of Europe, and the various academies of art vied with each other in doing her honor. While in France she kept a journal which she entitled "*Diario degli anni* 1720 *e* 1721. *Scritto da Rosalba Carriera;*" it was published at Venice in 1793 by Giovanni Vianelli, the collector of a fine number of her crayons and paintings. Her portrait, in the possession of Gianbattista Sartosi, represents her with a wreath of cypress leaves, emblematical of her gloomy presentiments concerning herself. She became blind before she reached the age of fifty, and died in Venice in 1757, deprived of reason as well as of sight.

Rosalba's name is the last of any great celebrity which we meet among the female artists of the Italian school of the eighteenth century; and with it we close our record of the women of her land who have gained for themselves an enduring fame, and for their fair southern country the reputation of having given birth to some of the highest artistic incarnations of all ages. The Cinquecento style was the latest essential development of Italian art; technical execution was the prom-

inent characteristic of the seventeenth century; and the eighteenth added more ornament and romantic expression, but no new excellence; and although our present century has produced some bright examples of patriotic devotion among the fair sex of *la bella Italia*, it has not illumined the horizon of art with any great and shining light.

In Germany and the Netherlands there are no traces of paintings previous to the Christian era, when Charlemagne attempted to introduce some of the refinements of Christian art into his dominions, chiefly in the form of architectural decorations; these paintings have been destroyed, and the sole artistic remains of that period which have reached us are some MS. illuminations contained in evangeliariums preserved in the imperial library, and in the library at Trèves;* they are awkward and feeble, and gaudily colored. These MSS. of the French and German schools reach from the time of Charlemagne down to the middle ages, and were executed generally by members of the religious orders of both sexes. The twelfth century saw great progress in art made in Germany and the adjacent countries; the style was an admixture of the Italian and Byzantine, and the subjects were the adventures of Charlemagne and his knights, the Song of the Niebelungen, and the Apocalypse. The manner was grotesque and picturesque, full of symbolical meaning, with very little or no light and shade, and careless of execution. At Cologne some specimens remain in the baptistry of St. Gereon, and on the roof of St. Michael's Church at Hildesheim. The choir and left aisle of the cathedral at Brunswick contain others which have been very unskilfully restored; they date about 1250. The most important remains of ārt in this period are some fragments of tapestry, preserved in the abbey of Quedlinburg, the work of the Abbess Agnes and her nuns, about the year 1200; the subjects are allegorical, and the designs evidently by different

* Miniature painting derives its name from "di minio," to paint by reduction of size; the term seems to have been first applied to the small illuminations of ancient MSS.

artists; some partaking of the stiff, ordinary manner of treatment, while others are full of grace and symmetry, and entirely free from the peculiarities of early Christian models. From 1250 to 1350 art in these countries was evidently restricted to the illumination of outlines; from 1350 to 1400 the outlines softened, the tints grew more harmonious, and the transitions from light to shade more melting. Dr. Waagen gives some beautiful representations of the paintings on an altar-chest preserved in the museum at Dijon, which was made by the order of Philip the Bold, about the year 1400. The school, after whose manner this chest was painted, attained its perfection at Cologne about 1500; it was spiritual, peaceful, and marked with moral purity; its chief weakness was a deficiency in anatomical knowledge. The brothers Van Eyck, who flourished about the beginning of the fifteenth century, introduced into the German schools the use of oil in painting according to their peculiar method; their style was highly artistic, and the perfection of the tendency which art had followed in the preceding age. Oil in a crude form had been used in painting for inferior purposes previous to the time of the Van Eycks, but they improved so much in its preparation that all injury to colors was avoided, and their method was speedily adopted by other schools of art. There was a sister of the Van Eycks, named Margaret, who is said by Kugler to have been a skilful painter, but of whose works he mentions no remains. Karl Von Mawder says that she died unmarried; she lived from 1370 to 1400, and was buried in the cathedral of Ghent.

Sabina Von Steinbach is said to have been the daughter of Erwin Von Steinbach, and his co-laborer on the Strasburg Cathedral, in the fifteenth century; the groups on the southern aisle are said to have been executed by her; they represent the Christian church and Judaism; the figures of the first group have a lofty and graceful aspect, bearing aloft the host and cross, and wearing crowns; the latter stand with downcast eyes and drooping air, holding arrows and the shat-

tered tablets of the Law. There are also four bas-reliefs of the Virgin's life and death; and on a statue of St. John are inscribed Latin lines, translated as follows:

"The grace of God be with you, O Sabina,
Whose hands from this hard stone have formed my image."

Anna Maria Schurmann was born at Cologne in 1607. When but seven years of age she cut figures in paper with great precision; and at eight drew pleasing heads in crayon. Possessed with an ardent desire to acquire knowledge, she is said to have been complete mistress of over a dozen languages, and the friend of distinguished men of learning; in friendship her qualities were admirable, and her charity was unbounded. Her literary labors were extensive, but the last years of her life were devoted to the establishment of the doctrines of Labadie, to the entire detriment of all other aims. She produced such meritorious works that a single small portrait by her was valued by Honthorst at one thousand florins —about four hundred dollars. She carved in wood and ivory, and modelled in wax, with great facility and taste; and exercised the art of engraving on copper and glass with much skill. A proficient in music as well as the languages, she united to all her acquirements a modesty which equalled her merit. William Penn, in his "Journey in Germany," gives an account of an interview he had with this paragon of her sex, at Vivert, in 1677, one year before her death; she had established in this place, in connection with the Princess Palatine, Elizabeth, a refuge for the scattered followers of Labadie. She gave all her wealth to the poor during her lifetime.

In 1627 Margaret Godewyck, called the "second Schurmann," was born at Dort; she was instructed in art by Nicholas Maas, and painted diversified landscape with great taste and pleasing effect; she also embroidered flowers from nature with the greatest perfection. Her erudition is said to have been very extensive. She died in 1677.

Maria Van Oostenoyck, the pupil of Jan David de Heem, was born at Nootdorp, near Delft, in 1630. She painted

flowers on vases and glasses, and her pictures are rare and deserving of high rank in her form of art. She received commissions from Louis XIV., William III., the Emperor Leopold, and King Augustus I. of Poland. A picture in the Vienna gallery, of a large sunflower, with tulips and poppies, is a faithful reproduction of nature, with a brilliant and glowing color and great beauty of finish, but the arrangement is tasteless, and the green color of the leaves blackened by age. There is a piece in the gallery at Florence with all the merits and none of the defects of the former one. The two specimens in the Dresden gallery are not so meritorious. Her composition was often weak in arrangement and gaudy in combination of color, but her flowers themselves were the mirror of nature, with a depth and brilliancy not attained by any other artist; her execution was broad, free, and highly finished. She died in 1693, after a quiet life spent in the study and delineation of her favorites.

Mademoiselle Rosée was born at Leyden in 1632; she was an artist of such extraordinary merit that she was called the Sorceress. According to Houbraken she produced her pictures on a rough panel, in what manner, and with what instruments, was unknown; but her colors were so manipulated that her works had the appearance of the most delicate and perfect finish of the pencil and oils. Some writers affirm that she worked with a preparation of floss silk, selected with the utmost care and graded to the perfection of tint. Her coloring was blended and softened, and united with such incomparable art that the warmth and glow of the flesh tints were life-like; and at a slight distance it was impossible to discern the manner in which the picture was executed. Whatever the manner may have been it was so magical that the matter was unsurpassed. Michel Carré said of one of her portraits: "It cannot be believed that it is not done with the pencil." Her portraits were striking in resemblance; and her landscapes, flowers, and architecture were imitated perfectly. One small landscape described by Houbraken was sold for five hundred

florins; the subject was the trunk of an old tree, covered with moss, with a large spider weaving his web among the leaves and branches; every part appears with so great a degree of force, so well relieved, so true, and so natural, that it was always beheld with astonishment. Of her pictures still preserved, the one in the cabinet of paintings at Florence was obtained at a high price and as a great curiosity. She died unmarried in 1682.

Maria Sibylla Menan was born at Frankfort in 1649. She studied under Abraham Mingon, and owed to him great neatness of touch and delicacy of coloring. She painted insects, reptiles, flowers, and plants from nature with careful study and exact observation; she was indefatigable in the pursuit of her art, and finished an innumerable quantity of designs; she frequently used water-colors on vellum. She drew frogs, ants, serpents, and spiders after nature with truth and exactness, and represented flies and caterpillars in all their styles of development. A work by her, called "The Wonderful Transformation of Caterpillars," a quarto volume, with copper-plate engravings executed by herself after her own drawings, was published by her in 1679. Moreri says she even voyaged to Surinam, in 1699, in order to paint correctly the inferior animal life of that region, and after her return to her own country published two volumes of engravings from her designs; these were well known to the curious in such matters, and were entitled "*Metamorphosis Insectorum Surinamensium*, etc.; the text by Gasper Commelin, from the manuscript of Madame Menan." Our readers will perceive that this extraordinary woman was not only an excellent artist but also a valuable contributor to natural history. Her greatest work was the "History of the Insects of Europe, drawn from Nature and explained by Maria Sibylla Menan." It included an account of the insects in all their vital stages, of the flowers they preferred, and the plants upon which they subsisted. Her pursuit of knowledge was terminated only by her death in January, 1717.

Elizabeth Neal is mentioned in De Bie's Golden Cabinet, in 1662, as residing in Holland, and painting flowers so well that she was likely to rival Gerard Zeghers, who flourished at Antwerp about the middle of the seventeenth century.

Joanna Katerina Block was born at Amsterdam in 1650, and early in life learned music, embroidery, glass engraving, and moulding in wax; she also painted well in oils, and was an excellent copyist. She executed in cuttings of white paper, in a wonderful manner, portraits and figures and scenes from nature. The Elector Palatine offered one thousand florins for three small cuttings by this artist, but the offer was not considered liberal enough; for a trophy of the arms of the Emperor Leopold I. of Germany she received four thousand florins. She executed many portraits; her style was neat, clear, and decided, and her cuttings placed upon a dark back-ground produced the effect of fine engavings.

Rachel Ruysch was born at Amsterdam in 1664. Her master was Wilhelm Van Aelst, and Wornerm places her among the best artists of her age. She painted fruits and flowers with great perfection and rare fidelity to nature, and the butterflies and insects which she introduced into her pictures were admirably executed. Her coloring was cool, like that of her master, but rather darker and heavier; she was not so successful in arranging groups as in painting single flowers; these were beautifully drawn and executed. Her remaining works are not numerous; two remarkable ones exist in the Hague museum, the smaller of a tone peculiarly soft and clear, and the larger exhibiting a rare warmth and harmony and a liberal tenderness of treatment. There are four beautiful pieces by her hand at Amsterdam, two at the art gallery at Munich, of masterly finish; and seven of her best productions are preserved at the château of Wilhelmshöhe, near Cassel. In 1701 she was elected a member of the Academical Society of Haye; and in 1708 the Elector John of Pfalz appointed her his court painter, and conferred much honor and wealth upon her. She died in 1750.

Anna Wasser was born at Zurich in 1679, and received a fine early education; evincing a strong taste for art she was placed under the care of Joseph Werner, at Rome, and taught from the best models; the coloring and correctness of a copy of a Flora finished by her at the age of thirteen was astonishing. Possibly Fuseli may have alluded to this early effort when he so highly praised an oil painting in his possession said to have been produced by her at that age. She applied herself to miniature painting with complete success, her manner and execution gaining for her a well-merited reputation. Her fame was established in Germany by the correctness with which she reduced from large paintings to miniatures the portraits of the duke of Wurtemburg and his sister the Margravine Von Durlach. She had a fine taste and good coloring; and painted some pastoral pieces with great delicacy and harmony and fine originality. She died in 1713.

Henrietta Wolters, a celebrated Dutch artist, was born at Amsterdam in 1692. Her first instructor was her father, Theodore Von Pee, and she was improved by some of the best native artists, and she finally became the pupil of Christopher Le Blond, and painted portraits after his style with great reputation. Peter the Great sat to her for his portrait, and was desirous to secure her services, but she refused to leave her own country. The king of Prussia also endeavored to persuade her to attach herself to his court; she declined his generous proposals. A copy of a St. Sebastian, after Vandyck, greatly enhanced her reputation from its correct outlines, its perfect imitation of coloring, and its freedom of touch. She died in 1741, after having secured to herself fame and wealth, as well as the respect and esteem of her companions in art.

Anna Deyster was born at Bruges in 1680, and was the pupil of her father Lewis Deyster, whose works greatly resembled Vandyck's. She excelled in landscapes; and in the copies of her father's pictures her imitation was so close as almost to defy detection. She abandoned art for the manufacture of organs and harpsichords in her later years, and died in extreme poverty i n1746.

Maria Verlst was born in 1680, and, like the preceding artist, studied under her father Herman and uncle Simon Verlst. She painted with great spirit and delicacy, and expressed in her portraits the mental qualities as well as the physical features of her subjects. She was highly accomplished in music and the languages. She died in 1744.

Maria Angelica Kauffmann was born at Chur, in the Grisons, in 1743. She first painted under her father Joseph Kauffmann, an artist of mediocrity; but her style was formed by a close study of the best Italian masters in their own country, where she lived early in life, and again permanently settled after a visit to England. While in London she gained astonishing popularity by her portraits; of these there is one of the duchess of Brunswick, sister of George III., at Hampton Court, and another of herself in the Munich gallery; its warmth and clearness render this one of her best works. Later in life she devoted herself chiefly to historical subjects; her peculiarities were an easy though superficial composition, a graceful action which was not materially marred by monotony, a warm and blooming coloring somewhat crude, and an agreeable execution, marked with the rather vapid sentimentality of her age. A very characteristic work is in the National gallery—Religion surrounded by the Virtues. In the Vienna gallery are two of her best pictures, Arminius welcomed by Thuselda after a Victory, and the Lament for Pallas, from the Æneid. At Burleigh House, the seat of Lord Exeter, some fifteen of her works are preserved, exhibiting a complete resumé of her manner. She also executed a series of etchings, thirty-one in number, chiefly heads and half-lengths, which show much skill and some delicacy of feeling. The celebrated Abbé Winckelmann, in a letter to Franck, in 1764, thus speaks of her: "I have just been painted by a stranger, a young person of rare merit. She is very eminent in portraits in oil; mine is a half-length, and she has made an etching of it as a present to me. She speaks Italian as well as German, and expresses herself with the same facility in French and

English, on which account she paints all the English who visit Rome. She sings with a taste which marks her among our greatest *virtuosi*. Her name is Angelica Kauffmann." She was a favorite friend of this enthusiastic writer; and she herself cannot be denied the praise of having forwarded the progress of modern art without in any degree departing from her natural feminine reserve and purity. Raphael Mengs says that her sex could justly be proud of her. She died in 1807, at Rome, and the members of the Academy of St. Luke assisted at her funeral; her latest pictures were borne after her body to the tomb in the Church of St. Andrea della Fratte, and her bust was placed in the Pantheon.

With our notice of this admirable woman and talented artist we close our sketch of the members of the schools of art which had, at this time, reached a high degree of development in spirituality in the countries of middle Europe. The master-workers had passed away, but the influence of their genius still pervaded all the forms of art; ideality had replaced conventionalism and prepared the way for the embodiment of nature, and the establishment of a healthy tone of sentiment, combined with a careful and conscientious execution.

The confirmation of a national style in the British school of art is of comparatively recent date, scarcely a century ago; but Walpole cites the time of Henry VIII. as the period when the arts first received liberal encouragement in England. Before that time the remains of painting are meagre and scattered, consisting chiefly of heraldic designs, a few portraits, and some poorly-authenticated paintings. Walpole describes several works of this age at length, and attributes to them considerable merit.

Susanna Horneband, painter in miniature, was invited to the court of Henry VIII., and remained in England until her death. We have not found any traces of her works, but we presume they must have been meritorious in order to challenge attention in Holbein's time. Our readers will readily recall Hans Holbein, portrait painter to Henry VIII.; his

genius gave an impetus to art, and the age immediately succeeding his was marked by a decided improvement in style.

The reign of Elizabeth was a golden one for literature and art, not so much from the queen's personal liberality as from the wealth and munificence of the country. However, we find among the payments made by Elizabeth's treasurer of the chambers, one of forty pounds to Levina Tirlinks, the painter of a fine card picture of the queen.

During the reign of James I. the arts were undisturbed by that monarch, who was, to quote Hayley's quaint "Epistle to Romney":

> "———both for empire, and for arts, unfit,
> (His sense a quibble, and a pun his wit,)
> Whatever works he patronized debased,
> But hap'ly left the pencil undisgraced."

His nobility retained the luxurious tastes of Elizabeth's time, and art was thus fostered, until, in the reign of Charles I., it burst into full flower. His majesty was a true patron of art, "a scholar, a man of taste, a gentleman, and a christian. The art of reigning was the only art of which he was ignorant."* During this reign Mrs. Anne Carlisle was much admired for her beautiful miniature copies of the Italian masters. She was highly in favor with Charles I., who, according to Graham, presented to her at one time, in connection with Vandyck, five hundred pounds' worth of ultramarine; from this Walpole argues she must have painted large pieces, as painting in miniature would take a long time to use such a quantity of coloring. Sanderson mentions "that worthy artist, Mrs. Carlisle;" and Vertue speaks of many of her pieces in the possession of Lady Coterel. She died in 1680.

Cromwell was not unkindly disposed towards art, but the puritanical fanaticism of the interregnum saw idolatry in painting, and the gratification of carnal pride in architectural display; and wit and learning were considered odious to the Holy Spirit.

* Gilpin's "*Western Tour.*"

With the Restoration came in again the dominion of art, but it was unfortunately accompanied by a total lack of taste. Fuseli has characterized the style of portrait painting in this and the succeeding age as follows: "It was reserved for the German, Lely, and his successor, Kneller, to lay the foundation of a manner which, by pretending to unite portrait with historical painting, gave a retrograde direction to both for nearly a century. A mob of shepherds and shepherdesses in flowing wigs and dressed curls, ruffled Endymions, humble Junos, withered Hebes, surly Allegros, and smirking Pensierosas usurp the place of truth, propriety, and character." Roquet, a lively French writer, asks, "Is it easy to know the picture of your wife, or of any other lady, as the image of a pagan deity just escaped from Olympus, and riding on a cloud, or as an armed Minerva, or a Savoyarde?" However, this style, as absurd as it appears to us, had plenty of admirers in those days; and, indeed, not a very long time has elapsed since a portrait painter of New York attempted to secure immortality for himself and as many fair ladies as there are Muses, reminding us very strongly of a story told of one of the artists of the English school. A lady of rank had sat to him for her picture, and she had been very patient over the painting of her face, which was plain, but was anxious lest her beautiful arms and hands should not be well rendered; at this juncture the artist observed to her that he would not trouble her for another sitting. "But my arms and hands! you have not painted them?" cried the lady. "That is all provided for, madame," answered the artist complacently, "I always take those from my maid." "But her arms are not mine," protested the lady. "It does not matter; they are very good ones," answered the imperturbable painter; and the lady lost her own arms and received instead the same pair that graced all the artist's other portraits.

Mary Beale, who was born in 1632, was the daughter of Mr. Cradock, of Walton; she studied under Sir Peter Lely, and painted in oils and water-colors, and drew in crayons.

Her portraits were in the Italian style and were much in favor, and her manner was faithful to nature, but rather stiff and heavy. She was the equal of Jane Killegrew in poetry,* and her superior in art. She died in 1697.

Mistress Anne Killegrew was born in 1660; she gave early proof of singular powers, and before her untimely death seemed destined to become one of the brightest ornaments of a loyal and talented family. Antony Wood praises her in an excessive manner, saying that she was "a grace for beauty and a muse for wit," and that "nothing was spoken of her that she was not equal to, if not superior." Dryden bestowed extravagant eulogies upon her. Her poems, published by her father after her death, were embellished with a portrait of herself after the manner of Sir Peter Sely.† She drew portraits of James II. and Mary of Modena, and some pieces of still life and history. Some of her works were disposed of at Admiral Killegrew's sale in 1727. She died suddenly of small-pox, in 1685, and was buried in the chapel of the Savoy, with her father's Latin epitaph affixed to the wall above her tomb.

Walpole mentions Susan Penelope Rose, daughter of Gibson, the dwarf, and Mary More, under the reign of William III., as a moderately-fair portrait painter. Mary Benwell's portraits in crayon and oil were admitted to the Artists' and the Royal Academy's exhibitions from 1762 to 1783.

Patience Lowell Wright was born at Bordentown, New Jersey, and, like Benjamin West, established herself in England eventually; there she attained great fame as a modeler in wax. Although a British resident, she was an ardent sympathizer with the American revolutionists, and at last lost favor with George III. on account of her strictures upon his

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* Vide her "*Paraphrase of the Psalms of David.*"

† This book is extremely rare. Ballard gives an account of it in his "Memoirs of Learned Ladies." It contains Dryden's Ode to her, a long Latin epitaph by her father, and her Pastoral Dialogues, Four Epigrams, The Complaint of a Lover, and some "Lines upon the Saying that my Verses were made by Another."

course towards America. Her unswerving patriotism is said to have rendered inestimable information to our government in the trying times of the revolution. Her figures of the king and queen and the prominent personages of the time attracted great attention; a full length of Lord Chatham is preserved in Westminster. She died about the beginning of the present century.

The Hon. Anne Seymour Damer was born in 1748, and studied the art of sculpture under Ceracchi; she learned the technical part of her art, and the elements of anatomy from Cruikshank; and her manner was perfected in Italy, where she studied assiduously the pure Greek style. Her works were elegant, tasteful, and classical, and were widely and favorably known; as a woman, she was esteemed for many accomplishments and virtues.

Mrs. Grace, who lived about this time, was the daughter of a shoemaker, and had never received any regular instruction; yet, from her artistic labors, she realized a fine income, and laid aside over twenty thousand pounds sterling. Her pictures were admitted to the exhibitions of the Society of Artists, and in 1767 she painted the historical work, the subject of which was Antigonus Selencus, and Stratonice. She died at Homerton about 1786.

Maria Hadfield Cosway, although early evincing artistic tastes, was destined and educated for the cloister, but meeting with Angelica Kauffman in London, about 1770, changed the tenor of her life; and after her marriage to Richard Cosway, a favorite portrait painter of the time, she devoted herself to art. Her picture of the beautiful Duchess of Devonshire, as Spencer's Cynthia, gained for her a brilliant reputation. She was the friend of the Hon. Mrs. Damer, and hosts of others, talented and titled. After severe domestic sorrows she died in 1822, at Lodi, where she had established an educational institution for females.

In England the foundation of the academies of this and of the preceding century has greatly benefited art; and the

English now promise to become the rival of the French and German schools in general excellence. The Society of Painters in Water-colors was established in 1818 and 1832, and an exhibition of the works of female artists was opened in 1858; we are informed that some of its contributors are rapidly gaining enviable distinction.

Although no country can show a record of female artistic merit equal to that of Italy, we must always rank France first among the lands which have produced the most famous women of the world; whatever feminine excellence was wanting in art in the latter was more than abundant in literature, and even in science. During the sixteenth century Isabella Quatrepomme flourished as an engraver on wood. Strutt, giving Papillon as his authority, says that she was a native of Rouen,.and cites as one of her works the frontispiece to an old calendar, representing a figure of Janus, executed about 1521, and marked with her monogram, an apple bearing the figure four.

In the next century, although the general influence of prominent women was pernicious, many of pure intellect and genius flourished; their progress in art was limited. The best female artist of this age was Elise Sophie Chéron. She was born in Paris in 1648, and was the daughter of Henri Chéron, an artist in enamel; observing her passionate fondness for art, he instructed her in design and coloring. She soon gained considerable eminence, especially in portraits; her works were elegantly disposed, well colored, finished, and of striking resemblance. She had a talent for historical subjects, and D'Argenville says she painted many of her portraits in character. According to Pilkington, she was admitted to the Academy of Painting in 1672; the Academy of Ricovrati, at Padua, also conferred membership upon her in 1699. She was a good poetess, and acquired much skill in music. Louis XIV. bestowed upon her a pension of five hundred livres. She died in 1711, and was buried in St. Sulpice.

The famous Madame de Pompadour engraved small pic-

tures from Boucher, and a set of sixty-three prints after the works of Gay. The reign of Louis XVI. gave birth to great female merit; and the revolution brought forth heroines. Among the artists of this century we notice Mlle. Collot, who assisted her husband, Falconnet, on his statue of Peter the Great; she also executed a fine bust of the same czar. Marguerite Gérard, the sister and pupil of Fragonard, painted charming scenes from domestic life. The tender and emotional style of Greuze had many female followers; and David was not without excellent imitators in his later age. We have in this age the names of several portrait paintresses of merit, Kugle-, Charpentier, Chapet, Brugère, Benoit, and others; the mother of Horace Vernet, the wife of Tardieu, and the daughter of Hortemels, were all successful engravers; but the two female artists who best represent the French school are Adelaide Vincent and Louisa Le Brun.

Adelaide Vertus Labille was born at Paris in 1749, and pursued the study of art under J. E. Vincent, of Geneva, the father of her second husband; her instructor in pastel painting was Latour, and her portrait of the sculptor Gois in this style won the Academy's prize. She was elected a member in 1781. She was court painter and an ardent royalist, and the destruction by the revolutionists of her picture of the king's brother, as Grand Master of the order of St. Lazarus, caused her much chagrin. She died, surrounded by admiring friends, about 1803.

Marie Louise Elise Vigée Le Brun, one of the most celebrated women of the eighteenth century, was born at Paris in 1765. Her early talent for art was fostered by her father, and her first masters were Briard, Davesne, and Joseph Vernet; and her success was somewhat marvellous. She married Le Brun, a connoisseur in art, during the reign of Louis XV. and a most unhappy marriage it proved to be. She was admitted to the Academy in 1783, and stood so high in public favor that, upon an occasion when La Harpe thus alluded to her, in a poem recited before the Academy:

"*Le Brun, de la beauté le peintre et la modèle,*
Moderne Rosalba, mais plus brillante qu'elle,
Joint la voix de Favart au sourire de Vénus,"—

the entire assembly, including royalty, arose and greeted the fair artist with unbounded applause. Among her associates were numbered the nobility of the land, and men and women of the highest genius. On the eve of the revolution she escaped from France by taking advantage of the amnesty extended to artists, and her subsequent wanderings proved to be rather a triumphal progress than an exile. She returned to Paris under the restoration of the Bourbons, and finally died at Monly in 1842. Her literary efforts were highly creditable. With the fair Le Brun we close our record of French female artists, and regret that the scope of our article does not permit us to give some details of the life and works of Rosa Bonheur, the greatest of her sex in art; and also of "the good woman and great artist," Felicie de Fauveau, who replied to her friends, when they remonstrated with her against her profession, adopted for the support of her family: "*Sachez qu'un artiste tel que moi est gentilhomme.*"

We cannot take leave of our subject without calling the attention of our readers, particularly those of the sex whose chroniclers we have been, to the influence which art has always exercised upon the people by whom it has been fostered. Its beneficial effects have not depended upon the establishment of schools, but upon the cultivation of nature; and where nature predominates, there art exercises its most potent sway. Its lofty mission is to soften and inspire the heart; to recall the pure and gentle thoughts of youth and innocence by reproducing scenes best fitted to summon up those memories; to fill the soul with high aspirations by depicting those deeds of heroism and virtue which the historian's pen has recorded in words, but which rise before us in beauty and majesty when clothed by the painter's art in the semblance of reality. The poet touches the heart with his sympathetic lines, but the artist stirs the soul with the lifelike creations of his pencil.

And even if no direct moral effect follows the impression which we receive from a well-executed and striking picture, we can not be insensible to an indistinct sensation of pleasure gradually pervading the mind. We are soothed without perhaps knowing the cause of our quiet, but we are none the less refreshed by the momentary calm. Whether the character and expression of a picture appeal to the emotional nature, or whether the spiritual part be affected by ideal perfection, we equally admit the power of the pencil and the genius which directed it. By the contemplation of a perfect work of art the generous emotions of the heart are aroused, the nobler impulses of the soul are awakened, or the perturbation of the mind sinks to rest, and the feelings which most embellish man's nature are exercised. No true artist will ever appeal to that inherent taint of vice which lurks in almost every human heart; rather the opposite extreme will be sought, and satisfaction will arise only in proportion as the work approaches the standard of truth and purity.

There is much in these reflections which appeals specially to the feminine nature, and we do not know of any more modest and delicate mode of elevating morality and advancing the higher interests of humanity than by the conscientious pursuit of art. It calls for no masculine vigor, no unnatural diversion from the sphere of grace and refinement from which we trust no true woman desires to depart; its study cultivates the ideas of truth and beauty, and its effects are highly conducive to moral harmony. We believe that the women of this and of future ages will give allegiance to its gentle power, in a manner in no way unworthy of their illustrious sisters, whose virtues and merits we have thus briefly recorded.

ART. II.—1. *An Inquiry into the Origin of the Discoveries attributed to the Moderns; wherein it is demonstrated that our most celebrated philosophers have, for the most part, taken what they advance from the works of the Ancients; and that many important truths in religion were known to the Pagan Sages.* By L. DUTENS. London. 1769.

2. *Histoire de l'Astronomie Ancienne, depuis son origine jusqu'à l'établissement de l'école d'Alexandrie.* Par M. BAILLY. Paris. 1781.

3. *Manners and Customs of the Ancient Egyptians; including their private life, government, laws, arts, manufactures, religion, and early history.* By Sir J. GARDNER WILKINSON, F.R.S. London. 1841.

4. *I monumenti dell 'Egitto e della Nubia, dal* DOTTORE IPPOLITO ROSELLINI. Tomi 3. Pisa. 1832.

MUCH interest has of late been excited by popular lectures on the lost arts; but sufficient attention has not been devoted to its kindred topic—the Lost Sciences. The reason of this has probably been the more abstruse nature of the subject, requiring for its elucidation different habits of thought and more profound investigation. It is comparatively easy to discourse of the beautiful remains of ancient art found in the old world, and especially in the valuable museums of Europe,—the frescoes, the pottery, the curiously-moulded objects of bronze, terra-cotta, glass, and the like; the ductility of Damascus steel, the intensity of color in the Egyptian stuccoes, and in the stained windows of the middle ages, the microscopic inscriptions on bricks and signet rings, and the exceeding fineness of Dacca muslin and mummy-cloth.

All this appeals directly to the organs of perception, is easily comprehended, and when an accomplished orator takes the matter in hand a large fund of instructive entertainment is afforded to an indolent audience; or, perhaps, it would be fairer

to say, to a large number of persons who have not had the time, the requisite education, or the needful opportunities to search out such information for themselves. Much has to be taken on trust by those who are so situated; for it falls only to the lot of the wealthy few to visit Egypt and the far East, and to study the numerous collections of antiquities which abound in Europe, especially in Rome. But with regard to the sciences known to the ancients, it is competent to the man of leisure and education to study the subject through the medium of the records of the past and the subsequent researches and discoveries of travellers, antiquaries, and explorers like Champollion, Layard, Rawlinson, Bunsen, Lepsius, Müller, and a hundred other gifted men, who have devoted their talents and energies to explaining and illustrating them.

Avoiding, therefore, the hackneyed themes of ancient architecture, manufactures, mechanical appliances, and inventions, we propose to take a cursory view of the condition of the sciences of astronomy, geography, mathematics, optics, acoustics, pneumatics, hydraulics, ærostation, navigation, chemistry, medicine, and philosophy among the ancients, with a view of noting, first of all, what has been "lost," and, secondly, to what extent modern science is indebted to them.

Modern science, properly so called, is of comparatively recent origin, dating back only to the introduction of the inductive philosophy advocated by Lord Bacon and subsequently adopted throughout the civilized world, but taught many centuries previously by Aristotle. It is, therefore, not much more than two hundred and fifty years old. What preceded it, during the middle ages, was mostly empiricism, falsely called science, and very far removed from the truth. But there is this difference between our mediæval progenitors and too many of us in the present day, viz., they had the most profound reverence for the *names* of Aristotle, Galen, Celsus, Hippocrates, Plato,

Pythagoras, and the other sages of the ancient world; while we have a tendency to sneer at them and to conceive the old Egyptians, Persians, Greeks, and Romans as being little better than barbarians. How unjust this opinion is will be apparent to any one who has studied the subject. They had not the light of christianity, and their morals will not bear comparison with the Christian standard; but they paved the way for the present progress of the human race in material power, and this generation is indebted to them in more ways than it is generally credited. They produced men of transcendent genius in every branch of human development; and it really becomes a question whether the moderns have equalled them in many of their productions of science and of art.

We find sufficient evidence as to their proficiency in astronomy; and the superiority of the moderns over them in this science is due rather to their mechanical appliances and the perfection of their instruments of observation than to their superior genius. That the ancients had means of making accurate observations, however, is indisputable, although they are unknown to us. Thus, the pyramids of Egypt are built exactly facing the four cardinal points, north and south, east and west.* If the Egyptians were unacquainted with the magnet, how was this done? How could they draw a meridional line? Eratosthenes of Alexandria ascertained, by some means with which we are not fully acquainted,† that Syene, the most southern of the cities of ancient Egypt, was situated on nearly the same meridian as Alexandria; and by measuring the distance between the two cities he ascertained the length of an arc of the meridian. The moderns have not added anything to his method, although it has been long known to them;‡ but they have more perfect instruments to enable them to ascertain the longitude. The Chaldeans ascertained that the earth performed a spherical revolution on

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* Bailly, p. 176.

† But see Laplace's *Précis de l'histoire de l'astronomie*, p. 34.

‡ Macrobius' "*Incerti auctoris*," *etc.*, vol. i, p. 219.

an inclined axis,* although there is no record of the mode by which they arrived at the conclusion; it is doubtful if they were acquainted even with the gnomon, the simplest of all instruments of observation. Epigenes says that in his time, shortly before that of Alexander the Great (B.C. 330), observations of the eclipses which had taken place for seven hundred and thirty years had been found recorded on columns of brick at Babylon.† Many of these observations have since been verified; but in order to be at all valuable to succeeding astronomers, they would require to have been accurate as to time: yet if there then existed instruments for measuring time, those ancient shepherds must have anticipated at least the Alexandrian philosophers who used the clepsydra, or water clock, by some hundreds of years, and the invention of chronometers by more than three thousand years.

At a very early period the length of the year was approximately ascertained. At least sixteen hundred years before our era the Egyptians, by attentively watching the heliacal rising of the Dog-star, discovered that the year consisted of 365¼ days, whence they formed their Sothic cycle of fourteen hundred and sixty-one years; but the Chinese attained to still greater accuracy by combining the solar year with their common lunar year of $364\frac{3}{9}\frac{4}{4}\frac{3}{0}$ days, whereby they formed the period of four thousand six hundred and seventeen years as the period when the sun and moon would occupy exactly the same relative positions. Now, in the absence of such mathematical instruments as we possess for the purpose, they had means for conducting and recording their observations which did not come down to us until recent times; and it is evident that their ingenuity and patience were worthy of high honor.‡

Their observations were carried on for centuries. Their accuracy may be judged of from the fact that, eleven hundred

* Bailly, p. 48. † Ibid, pp. 144–5.

‡ Duhalde's *Hist. of China*, vol. i, pp. 85–109.

years before our era, careful observations, by means of the gnomon, of the meridional altitudes of the sun were made at Loyang, in China, by which it was ascertained that the obliquity of the ecliptic was 23° 54′ 3·15″, which perfectly agrees with the theory of gravitation. Laplace considers this extraordinary accuracy as an indubitable proof of the authenticity of these ancient Chinese observations;* the mode by which they were then conducted has not been preserved by the Chinese. They once had an extended series of tables of eclipses; but all their ancient records of astronomy and other sciences were destroyed about two hundred and forty-six years before our era by the blind fury of one of their emperors,† and after that time they have neglected astronomy. They employed instruments of copper, the nature and construction of which are not now understood, in making their observations and calculations; they also employed gnomons and clepsydras,‡ and they constructed armillary spheres and celestial globes. They determined the latitude of cities by the shadow of the gnomon, and the longitude by eclipses of the moon. However, it appears that after the eighth century of our era all knowledge of the science was lost in China. But in India it made astonishing progress. From tables bearing date the 21st of March, A.D. 638, it appears that the longitudes of the sun and moon were accurately determined, and the length of the solar anomalistic year was estimated at 365 days 6 hours 12 minutes 36 seconds, being only 1 minute and 15 seconds too much.‖ The Indians professed to carry back their tables so far as three thousand one hundred and two years before Christ. Bailly contends that§ there existed in India prior

* *Précis de l'histoire de l'astronomie*, p. 11. "Cet accord remarquable ne permet pas de douter de l'authenticité de ces observations."

† Bailly, p. 127. ‡ Laplace's *Précis*, p. 9.

‖ See Bailly's 4th Book on the subject generally.

§ "Et comme les Indiens pratiquent sans inventer ni perfectionner rien, il s'ensuit qu'ils ont reçu cette manière de compter, avec les methodes dont ils font usage, d'un peuple plus ancien qui en était l'inventeur.—*Histoire de l'astronomie*, p. 110.

to that period an astronomy hardly yielding in accuracy to that which modern science has established on the theory of universal gravitation. In this view he is supported by Playfair; but he has been controverted by the French astronomer, Delambre, who disputes the possibility of proving the accuracy of those ancient Indian records by the method of tracing backward from our own tables. Nevertheless, it is impossible to deny that these pre-historic astronomers had, by some means unknown to us, discovered methods of determining with considerable accuracy the longitude of the sun and moon, the length of the year, the obliquity of the ecliptic, and the equation of the centre. Their science, whatever it may have been, has long since degenerated into nonentity; and it has produced no effect whatever on that of Europe.

The astronomy of the Greeks is a matter of more interest to us, inasmuch as we have borrowed from them the names of the constellations, stars, and planets; also those terms which are used in the science, and those which designate the instruments employed in it, as well as the name of the science itself. In short, the frame-work of modern astronomy is Greek. Much of the astronomy of the ancient Greeks was guess-work or the offspring of the imagination, and not the result of observations. Of this character are the so-called discoveries of Thales, who taught that the stars were fire and that the heavens were a sphere of which the earth was the centre. He was unacquainted with instruments of sufficient delicacy and accuracy to enable him to make useful observations; yet it is asserted that he predicted eclipses and determined the positions of the stars which form the Lesser Bear in such a manner that navigators could guide themselves thereby. If he really did this, it must have been by means which have not been recorded. He also taught the sphericity of the earth and the obliquity of the ecliptic.* Pythagoras taught that the moon received her light from the sun; and Anaxagoras truly explained the cause of eclipses. Pythagoras

* Laplace's *Précis*, p. 23.

also taught that the earth was a planet revolving round the sun,* but it was reserved for Copernicus to demonstrate the fact. Nicotas of Syracuse maintained that the apparent motion of the stars arose from the diurnal rotation of the earth on its axis.† Meton established "the golden number" or Metonic cycle of two hundred and thirty-five lunations, or six thousand nine hundred and forty days, being nearly equal to nineteen years, as the period when the sun and moon occupy again relatively the same position with regard to the stars.‡ This cycle has ever since been the basis of modern calendars.

The discoveries made by Hipparchus in reality laid the foundation of modern astronomy. It will be sufficient to notice his discovery of the eccentricity of the sun's orbit, the acceleration of the mean motion of the moon, and its erection and the precession of the equinoxes, to show how much modern astronomy owes to him.‖ Geography, also, is indebted to him for introducing the system of fixing the position of places on the maps by means of their latitudes and longitudes.§ Yet all this was for a time lost, for the taste for science withered away under the despotism of Rome and the inroads of barbarians. The Arabians or Saracens produced some splendid astronomers, who greatly improved the instruments in use, and corrected the Greek observations. Their own observations were made in a much more accurate manner than those of the Greeks, and they invented several short mathematical processes whereby long calculations were considerably abridged. They also improved the catalogue of the stars which had been made by Hipparchus. But they did little in regard to the theory, and thus the part which the Arabs played was rather that of handing down to posterity, in another form, the discoveries of their predecessors.¶ What they did discover will be alluded to further on. From their time to the arrival of the science in the

* Sir G. C. Lewis' *Historical Survey of the Astronomy of the Ancients*, chap. ii, sec. 17.

† Cicero's *Opera*, vol. iv, p. 39, edit. Bipont. ‡ Bailly, p. 226.
‖ Laplace's *Précis*, pp. 35, 41. § Ibid, p. 41. ¶ Ibid, p. 60.

fifteenth century astronomy received no accessions ; it became a thing of the past, to be in a manner rediscovered by Regiomontamus and Copernicus.

The science of geography seems to have been very defective among the ancients, as must necessarily have been the case when there were no methods of accurately determining the latitude and longitude. Still, they were acquainted with places and routes which lay for centuries unknown to Europeans ; some of them are only now being explored ; such are the routes from India to Thibet and from Birmah and Pegu to China, which have been in use from the earliest ages by the natives. The ancient geographers were acquainted with routes from Egypt to Abyssinia and the centre of Africa, and across Mesopotamia to Armenia and Central Asia, of which nothing but obscure tradition remained in the middle ages. The exploits of Marco Polo and Sir John Mandeville in penetrating from Europe to China and India in the thirteenth century were looked upon as marvellous, and their narratives were received with incredulity, just as the travels of Bruce in Abyssinia were at the close of the last century. These men, in fact, discovered the countries they visited, although they had been well known to the ancients. The Phœnicians, in the year B.C. 610, circumnavigated Africa, starting from the Red sea and ending at the mouth of the Nile ; yet Vasco de Gama received the honors of a discoverer from sailing round the Cape of Good Hope to the Indian ocean.

It has been contended that the Phœnicians anticipated Columbus two thousand years and discovered America, and, indeed, the evidence in support of such a view is stronger than is generally supposed. Niebuhr compares the primitive astronomy of Europe with that of America, and therefore supposes the latter continent to have been discovered at a remote period.* The story of the invasion of Africa and southern Europe by a prodigious army from across the Atlantic from an island "larger than Libya and Asia put together," as given in Plato,† has been

* *History of Rome*, vol. i, p. 281. † *Timæus*, sec. 7.

generally ridiculed, even by erudite men of the most recent times* yet the researches of Aubin, Brasseur de Bourbourg, and others in Mexico, and the discovery of the true method of deciphering the ancient Mexican records,† go far towards proving that there once existed regular intercourse between America and Europe. Without adopting all the theories of M. de Bourbourg respecting the extent of the American continent prior to the Deluge, by which he attempts to establish as a fact that Plato's Atlantis was a reality, the existence of customs and beliefs among the ancient inhabitants of Central America, almost identical with those of Egypt, are quite sufficient to found a claim for serious consideration of the subject.

At a very remote period the Malays were skilful navigators, doing in the East what the Phœnicians did in the West, visiting foreign lands far and near. They possessed means of navigating the ocean, which must have been connected either with a knowledge of the mariner's compass or of astronomy. There is reason to believe that the Chinese were acquainted with the magnetic needle from a very early age,‡ hence it is probable that the Oriental sailors knew of it also and used it They also steered by certain constellations, as did the Greeks and the Phœnicians, and undertook voyages of immense length. Thus the Malays conquered Madagascar and settled there,‖ and the Arabs traded with the island from the remotest ages, as far as tradition can carry one back. The works of Ptolemy and Strabo, the eminent geographers of ancient times, show that they had tolerably accurate conceptions as to the sources of the Nile, for their statements have been in great part corroborated by recent explorers.§ We have not yet mentioned the Periplus of Hanus, nor the discoveries of Imilco, which were made in the fifth century before the Christian era. Hanus sailed from Carthage to explore the coast of Africa and to plant colonies

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* Martin's *Etudes sur le Timée.*

† Brasseur de Bourbourg's *Quatre Lettres sur la Mexique.*

‡ Duhalde's *Hist. of China*, vol. ii. ‖ Sibree's *Madagascar*, c. 1.

§ Burton, Grant, Speke, Dr. Behe, and others.

there. Imilco explored the Atlantic and visited Ireland and the Ostrynnian islands off the coast of Spain.* Pytheas, a Greek navigator, who has been accused of mendacity, asserts that he visited an island called Thule, six days' sail to the north of Britain, near the Frozen sea, where six months of the year were light and six dark, without distinction of day and night.† There has been much dispute as to the locality here mentioned, whether it was Iceland or Greenland or the Shetland islands; some even think the whole story a fiction, but it shows that the ancients had some correct ideas about the polar regions.

From the days of Ptolemy until the revival of letters in Europe little was done for geography. The calamities which overwhelmed the Roman empire were followed by a general intellectual darkness, which settled down on the world and extinguished even the imperfect knowledge possessed by the ancient geographers. While barbarous nations poured in from several quarters, art and science ceased to be cultivated. The union by which the Roman power had bound together mankind being now dissolved, Europe was divided into small and independent, and for the most part hostile, communities, which had but vague conceptions respecting the situation of each other, while no intercourse subsisted between their members. With regard to remote regions all knowledge was lost, their situations, their commodities, and almost their names were unknown.‡ Several ages elapsed before this dense ignorance was dispelled. The crusades had vast influence in reviving the old intercourse between Europe and Asia which the Saracens and Turks had interrupted, and about the twelfth century of our era the Genoese and Venetians pushed their maritime expeditions into the Black sea. Geography then began to revive, but it is like a new science in its infancy, and the maps which were in use until within the last two centuries

* Lewis' *Historical Survey*, p. 454.

† Pliny, ii, 77; Lewis' *Hist. Survey*, p. 469.

‡ *Encyc. Britt.*, Art. "Geography."

were of the most imperfect and, very frequently, erroneous character; inferior to those of the ancients.

In two important branches of mathematics, viz., algebra and geometry, the ancients made great progress; but we are mainly indebted to the Arabians for our knowledge of the former, as well as for the numeral characters now in common use, and for the decimal notation. They fully appreciated the value of the sciences, and when all Europe was enveloped in the darkness of ignorance, they preserved from extinction the lamp of knowledge. They carefully collected the writings of the Greek mathematicans, translated them into their own language, and illustrated them with commentaries; otherwise those most valuable works would have perished, and Europe would have been compelled to rediscover for itself those lost sciences. It was through the medium of the Arabic tongue that the elements of Euclid were first introduced into Europe; and a part of the writings of Apollonius are only known at the present day by a translation from the Arabic, the Greek original being probably irrecoverably lost.*

But it is remarkable that, although the mathematical sciences were received with avidity and sedulously cultivated during a long period by the Arabians, yet in their hands they received scarcely any improvement.† It might have been expected that an acquaintance with the writings of the Greeks would have produced some change in their algebra, but it did not; their algebra continued nearly in the same state from their earliest writers on the subject to their latest. We can, therefore, only consider them as our benefactors in preserving for us the treasures of antiquity which would otherwise have been lost.

The science of algebra was then, for many ages, a lost science. The last great Greek writer on the subject was Diophantus, who lived about the middle of the fourth century after Christ Fragments only of his works have come down

* Dunham's *Hist. of Spain*, vol. iv, p. 40.

† *Encyc. Britt.*, Art. "Algebra."

to us, but of thirteen books which he wrote on arithmetic only the first six and a portion of the last have been preserved. These fragments do not form a complete treatise on algebra, but they show that he possessed great skill in the particular branch of which he treated, and that he was able to solve determinate equations of the second degree.* This seems to have been the limit of the algebraic powers of the ancients. The celebrated Hypatia, of Alexandria, who fell a victim to the fury of the mob in that city in the beginning of the fifth century, wrote a commentary on the works of Diophantus, but it is now lost, as is also a similar work by her on the conics of Apollonius. We should have known nothing of Diophantus had it not been for the Arabs, and the discovery of his works in the Greek language, in the library of the Vatican at Rome, about the middle of the sixteenth century, where it had probably been carried after the capture of Constantinople by the Turks, A.D. 1453.†

Algebra was very little known in Europe until Leonardo, a merchant of Pisa, brought it and the Arabic numerals from Africa about the year 1200. He wrote a treatise on it, but even that was lost sight of and forgotten, until the middle of the last century, when it was discovered in the Magliabecchian library at Florence. Still, very little progress was made in the science for more than three hundred years, when the Italian mathematicians, Luca de Burgo, Paciolus, Ferreus, Tartalea, and Florido took it up, and from that time it became a living science and gradually developed under the hands of successive masters to its present advanced state. To Vieta the science is especially indebted, for he introduced its application to geometry.‡

But not alone to the ancient Greeks and Arabs was algebra known. About sixty years ago English officers and explorers in India discovered that for many centuries the Hin-

* Diophanti's *Alexandrini arithmeticorum et de numeris multangulis*, with commentaries. Casper Bachet, Paris, 1621.

† See on the subject, generally, Bossut's *Histoire générale de Mathematiques.*

doos had had an algebra of their own, and they translated a number of Hindoo and Persian manuscripts on the subject.* From these it appears that the Hindoos were much in advance of the Greeks. They had a better and more convenient algorithm; they could manage equations of more than one unknown quantity; they did more than the Greeks in attempting the solution of equations of a higher order, and anticipated the modern discovery of the resolution of biquadratics; they went far beyond Diophantus in their method for the resolution of indeterminate problems of the first and second degrees; and they applied algebra to astronomical investigations and geometrical demonstrations, in which they hit upon some matters which have been re-invented in modern times. These works excited much surprise and attention when published by the English translators, the general opinion as to the Hindoos having been that they were indolent sensualists, little given to severe exercises of the mind. It now appeared that they well understood the arithmetic of surd roots, and were aware of the infinite quotient resulting from the division of finite quantity by cypher; and that they had found a general solution of indeterminate equations, to as near an extent as was attained until the time of Lagrange (1767).†

From the researches of the English Orientalists‡ it appears that the great Hindoo algebraists flourished many years ago. One of the earliest of them, viz., Brahmegupta, lived in the seventh century of our era; another, Bhascara Acharya, in the twelfth, but the most eminent of them, Arga Bhatta, lived about the same time the Greek Diophantus did (A.D. 360). Their works went out of use along with the science, among the Hindoos, after the Mohammedan conquest, and algebra was no longer cultivated in India. It was lost for several ages. Is it

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* Strachey's *Bija Gannita*; also, *Algebra, Arithmetic, and Mensuration* from the sanscrit of Brahmegupta and Bhascara, translated by H. T. Colebrooke. London, 1837.

† But see Delambre, who speaks slightingly of Hindoo algebra in his *Histoire de l'astronomie du moyen âge*, Discours preliminaire, p. 18.

‡ See the writers before quoted; also, Bailly's *Astronomie Indienne*.

because the Hindoos inherited their algebra from some more ancient and inventive people, of whom no other than scientific memorials remain?

Geometry is another branch of mathematical science which disappeared from the world for awhile, to be, as it were, dug up and recovered some centuries later. What has been said of the part played by the Arabians in preserving the works of the ancient Greeks on algebra from destruction, applies also to geometry. They translated the writings of some of the Greek mathematicians into their language,* but made no additions to the science. The Hindoos, however, have some works on the subject of great antiquity, but they are remarkable for not containing demonstrations. They were acquainted with the celebrated proposition concerning the squares on the sides of a right-angled triangle, the discovery of which has been ascribed to Pythagoras; and they also knew the rule for finding the area of a triangle from its sides, which was not known to the early Greeks; that was first made known to the world by a Greek mathematician named Hero, who lived in the eighth century of our era. It appears, too, from the institutes of Akbar, that the Hindoos supposed the diameter of the circle to be to its circumference as 1250 to 3927, which is the proportion of 1 to 3.1416, and is more accurate than the determination of Archimedes, or, indeed, than any known before the sixteenth century. The Chinese made very little progress in geometry. It seems that they knew the forty-seventh proposition of the first book of Euclid earlier than the Greeks, but it remained sterile in their hands. They had no spherical trigonometry before the thirteenth century, and then it was not of native growth, but probably derived from the Arabians or the Persians. The Romans paid but little attention to the sciences, and, on the fall of their empire under the inroads of the barbarians, the European world was left in almost total darkness. This remark applies, therefore, to all

* Dunham's *Hist. of Spain*, p. 40.

the sciences known to the ancients, and, of course, to optics of which we are now to speak.

There can be no doubt that glass was known at a very remote period. Lenses and spheres were used as burning-glasses. Globes of glass were used by the vestal virgin to kindle the sacred fire, and by surgeons to burn the flesh of sick persons when it required to be cauterized. These uses of glass are mentioned by Anthemius, Plato, Aristophanes Euclid, Lactantius, Aristotle, and others among the ancients. Claudius Ptolemy, the celebrated Alexandrian astronomer wrote a treatise on optics,† which in time escaped the notice of philosophers, and remained unknown until 1816, when Delambre published an analysis of it from the manuscript in the Royal Library at Paris. This work treats of various forms of mirrors, the laws of reflection and refraction and of vision and records many experiments on these and kindred topics. His theory of refraction was more complete than that of any astronomer before the time of Cassini. Galen, the Greek physician, also treated of optics, and discussed the principle of the stereoscope, the instrument now so popular No improvement was made in the science in Europe for more than a thousand years after his death, but among the Arabians it received some important accessions. It was not until the time of Vitello, A.D. 1270, that the study of it was revived in Europe; it had then lain dead for twelve hundred years, and at that time the works of the Greeks and Arabians were lost or unknown.

It has been generally supposed that telescopes, microscopes, and spectacles were invented in Europe in the late middle ages, and the claims of Roger Bacon to the honor of inventing them have been advocated by several eminent writers. Yet when we read that Nero used a glass to enable him the better to see the gladiators in the circus,‡ and that the pirate Mauritius used to stand on the promontory of Lily

° Cited by Dutens, chap. 10. † *Opticorum sermones quinque.*

‡ Pliny's *Hist. Nat.*, lib. 37, c. 5.

bæum, in Sicily, and watch the ships come out of harbors on the African coast by means of an instrument which he carried, it is hard to believe that telescopes were known for the first time in the twelfth century of the Christian era. It is equally difficult to believe that microscopic lenses were unknown to the ancient Assyrians and Egyptians, when we find inscriptions written by those nations which are invisible to the naked eye.* Such could only have been engraved with the help of the microscope, or of an analagous contrivance, as described by Seneca. Yet all knowledge or remembrance of this instrument perished during the many convulsions which the East underwent. The conquest of Egypt by Cambyses, and the destruction by him of the Egyptian temples and monuments, appears to have been peculiarly fatal to science.†

With regard to acoustics, pneumatics, hydraulics, aeronautics, and other kindred physical sciences, the ancients seem to have possessed but vague notions as to the principles on which they were based, although they succeeded in producing some marvellous effects. Archimedes was acquainted with the fact that a body must remain suspended in a fluid denser than itself, and he laid down several other fundamental principles in hydrostatics.‡ Aristotle speaks of nature abhorring a vacuum, and treats of pneumatics. That the Greeks and the Egyptians understood some of the laws of acoustics, is evident from the mysterious awe they were able to produce in their temples and at their oracles by means of sound. Their attempts at the practical mastery of aeronautics were, however, miserable failures. They seem to have been fired with the idea of being able to find out the means of flying, in which they have been imitated by several moderns;

* Seneca's *Quæst. Naturæ*, lib. 1, c. 6.

† The state of optical science among the Greeks and Romans is best ascertained from Claudius Ptolemy's work, "*Opticorum sermones quinque.*" See also Smith's "*Optics.*"

‡ Περι ὀχουμένων, Marinus Ghetaldus, "*Archimides' promatus.*" But hydrodynamics was a science little cultivated by the ancients. The work of Julius Frontinus, "*De Aquæductibus urbis Romæ Commentarius,*" probably contains all they knew.

but in every case the fate of Icarus awaited the adventurer. The notions entertained by the ancients respecting the composition of the world might have suggested to them important hints for realizing the scheme of aërial navigation, but they advanced only a little way in the science. Perhaps there is not much to regret in the loss of what was known to them with reference to the physical sciences. Their philosophy was in a great degree conjectural. Modern science is based on experiment and induction, and it is owing to this that it has made such rapid and certain progress. It may even be believed that the darkness which overspread Europe during the early middle ages was beneficial to the human mind in throwing it back on its own resources, and in forcibly destroying its reliance upon the authority of a few great names like those of Hippocrates, Galen, and Aristotle. At the commencement of the fifth century of our era, the fate of the ancient philosophy and science was determined by the murder of Hypatia at Alexandria; not, indeed, by the mere massacre of that gifted and beautiful woman, but by the spirit of bigotry which caused it. After this cruel scene, intellectual stagnation settled upon the city which for seven hundred years had been the home of science, literature, and philosophy. And so things remained for more than two hundred years, until they were changed by foreign invasion. The Arabs broke the heavy spell of ignorance and fanaticism. "On the shore of the Red sea once more a degree of the earth's surface was to be measured and her size ascertained—but by a Mohammedan astronomer. In Alexandria the memory of the illustrious old times was to be recalled by the discovery of the motion of the sun's apogee by Albategnius; and the third inequality of the moon, the variation, by Aboul Wafa; to be discovered six centuries later in Europe by Tycho Brahe The canal of the Pharaohs, from the Nile to the Red sea, cleared out by the Ptolemies in former ages, was to be cleared from its sand again. The glad desert listened once more to

the cheerful cry of the merchant's camel-driver, instead of the midnight prayer of the monk."*

We are, however, not disposed to place a very high value on the contributions of the Arabs to science.† They were not originators but conservators, as we have already remarked, and these opinions will clash with those of the admirers of Saracen sway in the East and in Spain. At the outset of their career they were mere fanatics, settling all things by the sword, and whatever truth there may be in the story of their burning the books of the library at Alexandria, for the purpose of heating the baths, there is nothing improbable in it from the character of the race. They were guilty of acts of far more atrocious character. In time, however, when the flush of conquest had ceased and the limits of dominion were reached, the character of the Arabians changed, and they became zealous cultivators of learning. In those days the chief physicians were Jews, and as the Arabians fraternized with them, they repaid the kindness of the conquerors by imparting to them their knowledge of medicine. The Emperor Constantine the Great suppressed the Asclepious or medical schools of the Byzantine empire, and after that the cure of the sick devolved upon unskilful persons, who had not been educated as physicians. The Jews and the Nestorian Christians, however, devoted themselves to the study of medicine, and became proficients in it. If it became a lost science to the Greeks of the empire, and was almost wholly unknown to the nations of Europe in the early middle ages (A.D. 500–1000), it was revived by the Arabs with extraordinary success. But they also brought to their studies a morbid desire for the marvellous, and were continually searching out the means for turning lead into gold, and for prolonging life indefinitely. They were constantly occupied with the philosopher's stone, the *elixir vitæ*, the powder of projection, magical

* Draper's *History of the Intellectual Development of Europe*, p. 241.

† Mr. Dunham seems to entertain a more favorable opinion of them.—*Hist. of Spain*, vol. iv, p. 40.

mirrors, perpetual lamps, and the transmutation of meta They carried on experiments in secret places and caver under ground, where they lighted their fires and work with the alembic; and though they never succeeded discovering what they were in search of, they discover many things they were not in search of. They laid t foundation of experimental philosophy and science, especia of chemistry, and incidentally added much to the science medicine.*

The invention of gunpowder has been generally attribut to Roger Bacon, who lived in the thirteenth century, but his d covery was but the re-invention of what had been known the Greeks and Chinese centuries previously. Marsus Gr tus, who lived in the eighth century, gives the composition o explicitly.† He directs us to pulverize in a marble mor one pound of sulphur, two of charcoal, and six of saltpetr and he says that if some of this powder be tightly rammed a long, narrow tube, closed at one end, and then set on fi the tube will fly through the air; this is evidently the rocke The Arabs also had their explosive mixtures. Automatic f was made from equal parts of sulphur, saltpetre, and sulphi of antimony, finely powdered and mixed into a paste w equal parts of juice of the black sycamore and liquid asph tum, a little quick lime being added. And it was necessary keep this material from the rays of the sun, which would i it on fire. They also discovered the strong acids, the cre of which has been given to Priestley, Scheele, and oth modern chemists.‖ Djapar, in the eighth century, discover nitric acid and aqua regia, and taught that metals, when c cined, increased in weight. This, again, is supposed to be

* See a most able discussion of the whole subject in the *Encyc Brit.*, A "Medicine." Ferrera's *Histoire Générale de l'Espafia*, vol. viii, part siecelo 16.

† Dutens, sec. 207. "Secundus modus ignis valatilis hoc modo confici R., lib. i, sulphuris vivi, lib. ii, carbonis salicis, salis petrosæ, vi. lib, q tria subtilissime terantur in lapida marmoreo."

‡ Ibid, and *Opera Medica*, Joan Mesuæ, Venice, 1825.

‖ Dutens, sec. 203.

modern theory. Pharges, the great physician of Bagdad, in the ninth century, discovered sulphuric acid by distilling from dried green vitriol. He also suggested the preparation of pure alcohol by distilling spirits of wine from quick lime. Bechil, another Arabian chemist, discovered how to make phosphorus. These Arabs were well acquainted with the practical part of chemistry, and the operations of distillation, sublimation, filtration, and the like.*

To Dr. Dalton has been ascribed the honor of advancing the atomic theory; yet this doctrine was taught by Democritus in the fourth century B.C. He asserted that all things were composed of invisible, intangible, and indivisible particles or atoms which, by reason of their configuration, combination, or position, give rise to the varieties of forms; to the atom he imputed self-existence and eternal duration.† How did it happen that this theory of Democritus was overlooked or else kept out of sight, while modern chemists were agitating the subject? We may ask the same question on another subject—the origin of mountains. Geology is quite a modern science, and has nothing to do with any one that has been lost. When it first attracted attention at the beginning of this century, its votaries were divided into two parties; the Neptunian, or those who attributed all geological phenomena to the action of water, and Plutonian, or those who attributed them to the action of heat or fire. Since that time various theories have been started as to the origin of mountains. Among others, that of Sir Charles Lyell has met with general acceptation. He may or may not be familiar with the works of Avicenna, the great Arabian physician, but he himself might have written the views which the learned Arab expressed on the subject. Avicenna lived in the tenth century, the darkest period of the middle ages; and this is what he says:‡ "Mountains may be due to two different causes; either

* Mesuæ, *ubi supra*.

† *De atomis*; see *Vita et Philosophia Democriti*. Lyden, 1648.

‡ Liber 1, p. 103; Ed. per F. Paulinum. Venice, 1508.

they are effects of upheavals of the crust of the earth, such might occur during a violent earthquake, or they are the effe of water which, cutting for itself a new route, has denud the valleys, the strata being of different kinds, some soft, so hard. The winds and waters disintegrate the one, but lea the other intact. Most of the eminences of the earth have h this latter origin. It would require a long period of time f all such changes to be accomplished during which the mou tains themselves might be somewhat diminished in size. B that water has been the main cause of these effects is prov by the existence of fossil remains of aquatic and other anim on many mountains."

To return to the sciences of medicine and surgery, we fi that, at a time when they were wholly unknown in Euro the Saracens had applied chemistry both to the theory a practice of medicine, in the explanation of the functions of t body and the cure of its diseases. They were acquainted wi the circulation of the blood, which was taught by Hippocra and Plato.* Nor was their surgery behind their medici They used the cautery and the knife without hesitation, a did not shrink from the performance of the most diffic operations. Albucasis, of Cordova, has left us ample descri tions of the surgical instruments then employed; and fr him we learn that in operations on women the services properly instructed females were secured. The Sarac translated and studied the works of Hippocrates, Galen, C sus, and Aristotle, and many of their learned men wrote co mentaries on them. Averrhoës composed valuable comm taries on Aristotle, A.D. 1198.† At this time the profession physician and surgeon in all of Europe, except Spain, was ercised by barbers and quacks. The ignorant peasant sorted to a shrine when attacked by disease, and hoped t

* Hippocrates' *De Circulatione sanguinis*. J. A. Vanderlinden, Leyd 1659; Plato's *Timæus*: "την δε δη καρδίαν ἁμα τῶν φλεβῶν, καὶ πηγην περι θερομένη κατα παντα τὰ μέλη σφοδρως αἱματος."

† Dunham's *Hist. of Spain*, vol. iv, p. 40 *et seq.*

he might be cured by a miracle. The remedies in vogue were mostly "old women's remedies," culled from herbs and from animal matter. Amulets, charms, and exorcisms were greatly relied upon; but the idea of consulting a really skilful and scientific Jewish or Arabian physician was looked upon with horror. Medicine was, for ages, a lost science to the bulk of the civilized world, nor can it be said to have assumed a really scientific form until within the last hundred years.

The knowledge to be derived from Jewish and Mohammedan sources was most religiously scouted by mediæval christians, who thus retarded their own progress for centuries and rendered it necessary for them to re-discover those sciences which they had either allowed to perish or helped to destroy. The expulsion of the Moors and Jews from Spain was a calamity from which that country has not yet recovered. Though victors on the battle-field, the Spaniards were but ignorant barbarians compared with those they expelled. The Moors were the first to build observatories in Europe.* The Giralda, or tower of Seville, was erected under the superintendence of Geber, the Arab mathematician, A.D. 1196, for an observatory. On the expulsion of the Moors from Spain in 1571, the Spaniards were so ignorant that they did not know what to do with this tower, so they turned it into a belfry !†

The Arabian astronomer, philosopher, and chemist—the latter is but a contraction of the Arab word *alchemist*—Alhazen, who flourished about A.D. 1100, anticipated many modern discoveries in science, but, for the reasons above given, his discoveries were lost to the world. They were quite numerous, and related to the theory of vision of colors, the refraction of light, the height and weight of the atmosphere, the principles of hydrostatics, the theory of gravitation, capillary attraction, specific gravities, and the successive development of organisms. He explained the weight of the atmosphere, and thus anticipated Torricelli. He very nearly anticipated Newton in the

* Ibid, vol. iv, p. 41. † Ferreras, *ubi supra*.

law of gravitation, and many of the modern chemists in his tab
of specific gravities, and he was before Owen and Darwin
affirming the development of man through successive sta
of being.* The great Arabian astronomer, Ebu Junis, v
the first who applied the pendulum to the measurement of ti

Enough has been said to show that the ancients had m
considerable progress in the physical sciences, and it may
inferred that had this rate of progression been continued fr
where they left off down to the present time, we should h
advanced very much further in every branch of knowle
than we have as yet done. But it has been ordered dif
ently. Overpowering inroads of barbarians, Turks, Go
Vandals, and Huns were permitted to desolate the civili
portions of the globe, and trample out all vestiges of literatu
philosophy, art, and science. What was saved was concea
in remote monasteries or underground repositories, wher
many of the productions of the master minds of antiqu
mouldered away and were forgotten. What was not acc
plished by war and devastation was done by Christian sup
stition, ignorance, and bigotry. The Jews were looked u
as a race with whom it was a mortal sin to be on good ter
and the Arabs, Saracens, Moors, and Turks being all follow
of Mohammed, were equally abhorred, and communicat
with them was avoided, except in Spain, where much mu
courtesy prevailed between Christian and Mahommedan. A
to this the long-continued political and religious wars of Eur
during the middle ages, wherein whole cities were destroy
provinces laid waste, libraries burnt, churches, colleges, c
vents, and public buildings pillaged, and philosophers pe
cuted, and we may well wonder not that so many arts
sciences became lost, but that any trace of them should h
been preserved.

The condition of Europe during the tenth and eleventh c
tuturies was deplorable, while in the Saracen cities of Cordo
Seville, Granada, and Toledo men might walk, after sun

* *Opticæ Thesaurus, Alhazeric Arabis*, à Frederico Risuero. Basle, 157

for miles in a straight line by the light of the public lamps (seven hundred years before there was one public lamp in London), through streets solidly paved; while these Saracens had their marble palaces, their frescoed walls, their stained glass, vaulted roofs, their floors of mosaic and gold, their arabesques and paintings, their fountains, cascades, and flower gardens, their chandeliers and lamps, carpets, tapestry, couches, pillows, frankincense, music, and dancing, their whispering galleries, baths, hot and cold water service, and their magnificent libraries; while Southern Spain had its universities, colleges, and learned professors,* what was the state of things in the rest of Europe? The dwellings of the rulers of Germany, France, and England were scarcely better than stables, chimneyless, windowless, and with a hole in the roof for the smoke to escape through. The lower orders of the people could scarcely be said to have emerged from the savage state. They were unclean in person and benighted in mind, and they inhabited huts, in which it was a mark of wealth if there were bulrushes on the floor and straw mats against the wall. They were miserably fed on beans, vetches, roots, and even the bark of trees, and clad in garments of untanned skin, or, at the best, of leather—perennial in durability, but not conducive to personal purity—a state in which the pomp of royalty was sufficiently and satisfactorily manifested in the equipage of the sovereign, an ox cart drawn by not less than two yokes of cattle, quickened in their movements by the goads of pedestrian serfs, whose legs were wrapped in wisps of straw.† Serfdom or slavery in some form or other generally prevailed; the manners of the middling or upper classes were coarse and often brutal; their amusements partook of the same character. These were some of the results of the loss of the arts and sciences, literature and philosophy. It is astonishing that these should have disappeared so completely that even the

* Hallam's *View of the State of Europe during the Middle Ages*, vol. i, chap. iv; vol. ii, p. 484.

† Hallam's *View*, vol. ii, pp. 414–416, n.

memory of their existence was cherished only by a few supe rior minds; even the Emperor Charlemagne was unable write.* It was as though a black pall had been cast ov Europe during that *sæculum obscurum*, the tenth century.

Moral and mental philosophy were lost sciences, also, the time we are speaking of. After the death of Boëthiu the learned commentator of Aristotle, the author of "Tl Consolation of Philosophy," who perished through the jealo fears of a Gothic king, and the closing of the schools of ph osophy at Athens about the same time (A.D. 529) by the Er peror Justinian, Greek philosophy came to an end. What had accomplished during the eleven centuries of its existen remains imperishably inscribed on the pages of history. B ginning with Thales and ending with Boëthius, it had sound all the depths of speculation as to the nature and destiny man, his constitution in relation to time and to eternity, a to external things. Many of these speculations of the gre philosopher attained to great sublimity, but they can scarce be said to have reached the dignity of a science until Ari totle introduced the inductive philosophy. The early Gre philosophers began by speculating on the origin of the wor Their reasoning failed, because it was founded on imperfe and erroneous observations. They allowed themselves to deceived by appearances, and believed the earth to be fl and the sky convex. They thought there were only four el ments—earth, air, fire, and water; and they sought to dedu all things from the operations of one of these. Thus Ana menes of Miletus, and Diogenes of Apollonia, asserted that was the first principle;† Thales held that water was;‡ Her clitus taught that fire was;‖ Pythagoras soared far abo these materialists when he brought forward the doctrine th number was the essence or first principle of all things. F disciples went so far, indeed, as to reason the world out

* Hallam's *View*, vol. ii, p. 352 and n.

† *The Biographical History of Philosophy*, by George Henry Lew . 6–8. ‡ *Ibid*, p. 4. ‖ *Ibid*, p. 69.

existence; they held that substance was nothing more than form and actually contained no matter; that it could have had no origin in time, and that its very existence was an illusion.*

One might easily fill a volume with these theories, countless in number and unsustained by logical deduction from experiment or observation, but it is sufficient to observe that the failure of them to account for phenomena of daily occurrence at last paved the way for the true method of investigation. Plato and Pythagoras, dealing in universals only, lived, as it were, in the clouds. It was reserved for Aristotle to reverse the system. While they descended from universals to particulars, he began with particulars and ascended to universals by induction; and his system was, in reality, the true beginning of science. Plato regarded universals or types as having an actual existence;† Aristotle asserted that they were mere abstractions of reasoning; from details he rose to a general conception; he was, in fact, a materialist, while Plato was an idealist.‡ While the theories of the latter were showy but unsubstantial, the hypotheses of the former were unattractive and erroneous; it could hardly be otherwise. A large and varied number of experiments are necessary to establish an hypothesis, and from a number of hypotheses a general law is deduced. Not having time or opportunity to make a sufficient number of observations and experiments, Aristotle failed in the application of his own principles.‖ But he has the immortal honor of having indicated the right path to knowledge, a hint which was subsequently acted upon by Lord Bacon and the philosophers of modern times.

After the closing of the schools of philosophy by Justinian, we hear very little of Aristotle's philosophy for more than five centuries. The true basis of all science which he had indicated was neglected. When the human mind began to shake off the lethargy which had so long deadened its faculties, we find

* *The Biographical History of Philosophy*, by George Henry Lewes, pp. 6–8.
† *Ibid*, pp. 26–33.
‡ *Ibid*, p. 247.
‖ *Ibid*, p. 251.

the philosophers of the new era disputing about airy logic problems and metaphysical subtleties, which served no oth purpose than to display the ingenuity of their propounder but did not contribute to the revival of science. The scholast philosophy of Abelard and his contemporaries, which at fir grew out of dissensions on the doctrines of the church an the mysteries of religion, gave birth to the celebrated contr versy between the nominalists and the realists. The latt thought that the general type of things had a real existence this was precisely the long-forgotten or neglected doctrine Plato. The nominalists held that types were merely a ment abstraction expressed by a word; this was the neglected do trine of Aristotle. And so the whole affair was but a reviv of the ancient Greek controversy which had been carried o fifteen hundred years previously;* only the names of th actors were changed, and Abelard, Roscelin, Anselm, Johan nes, Scotus Erigena, Thomas Aquinas, and Duns Scotus usur the places of the illustrious Greeks.

How far modern metaphysicians have really progresse beyond the ancient is a matter of doubt. It is a fair que tion to ask whether metaphysics has yet attained to the di nity of a science, and, indeed, whether it ever will. As n man can read the interior perceptions and sensations of an other, he is compelled to reason from his own. The numb of men qualified to investigate their own mental constitutio is very limited, and still fewer are those who possess the gi of conveying the result of their investigation in an intelligib form to others. But just as Aristotle's inductive philosoph failed in practice because he had not sufficient data fro which to deduce general laws, so it is with metaphysics. I order to eliminate the general laws of mind, it is necessary t have a large number of experiments and observations. How then, are these to be furnished? The experience of one ma requires a volume to detail it; the experience of a thousan

* Lewes' *Biographical History*, pp. 355–361.

would require a thousand volumes; and even then a thousand experiences out of many thousand millions can hardly be considered broad enough to base a well-established law upon. Yet what human brain could digest the detailed reports of a thousand metaphysicians and deduce permanent laws therefrom, even assuming that the writers had made no mistakes and been in no way misled?

But, until this is done, where is the *science* of metaphysics? One philosopher is refuted by another, and so it has been from the earliest times down to the present; and this is simply because they cannot appeal to facts in sufficient numbers to establish laws. The philosophy of mind never attained to the dignity of science in ancient times, and can, therefore, hardly be included among the lost sciences; but the contributions of the great thinkers of antiquity to the literature of the subject had their value, and that was lost to the world for long ages. The revival of learning in the fourteenth and fifteenth centuries restored much of what had been lost; but even with all the help which can be derived from Plato, Zeno, Aristotle, and others, as well as from Descartes, Spinoza, Locke, Boyle, Condillac, Berkley, Hobbes, Hartley, Reid, Thomas Brown Hamilton, Cousin, Kant, Fichte, Hegel, Schelling, and a number of other modern thinkers, the old Scotchman was not *very* far out when he said: "When ye hear a'man speaking to others of what they don't understand, and what he does not understand himself, that's metaphysics."

ART. III.—1. *Reports of the Secretary of the Navy to the President of the United States, from* 1863 *to* 1870.

2. *Discussions in Congress on the Navy of the United States during the last ten years.*

IN our last number we showed that the statesmen and philosophers of all ages have deemed yachting * worthy of the

* Art. "*Yachting not merely Sport.*"

most earnest encouragement, and awarded the highest honors to those who distinguished themselves in seamanship by that means; we also showed that it was not merely for the manly invigorating sport it afforded that it was thus highly esteemed but chiefly because in every maritime nation it contributed much more powerfully than the ordinary observer could understand to the national safety and prosperity. For what debating societies have ever been to the bar, the senate, and even to the church, amateur sailing, or aquatic sports, have been to the war and commercial navies of every nation that had the advantage of possessing such.

But when we come to speak of the Navy no research is necessary to prove its utility; the most thoughtless reader can comprehend its importance without being reminded of the noble results accomplished by the fleets of Rome or Carthage Athens or Tyre. Accordingly, we shall confine ourselves, in the present instance, to facts which are within the reach of all, only premising that it is now too generally forgotten that some of the most glorious as well as the most momentous of the world's battles have been fought by navies.

In proof of this, it were almost sufficient to mention Salamis. At this battle, the small but heroic and highly enlightened republic of Athens saved itself from the Persian yoke by means of its navy; which, though much smaller than the combined fleets of Xerxes and his allies, gained a complete and ever memorable victory. It is well to remember that the victorious fleet was chiefly manned by the yacht clubs of Athens, to the spirited rivalry of whose swift-sailing *Akato* and *Keles*, on the Illisus and the Ægæan, we alluded in the article referred to above; it should also be remembered, especially by our young men, that the commander-in-chief of the Athenian fleet—the officer corresponding with the Admiral of the present day—was Themistocles, who was rendered so illustrious by the event that when the greatest conqueror of modern times was forced by the fortune of war to surrender to the

British, it was not to Hannibal, Alexander, or Scipio he was proud to compare himself, but to the naval hero of Salamis.

With these remarks as an introduction we proceed to the discussion of a subject to which no American citizen, whether native or naturalized, can be indifferent. Those most unfriendly to republics, even among our European readers, can hardly charge us with indulging in mere hyperbole when we say that it would seem, from the progress made by our country in the arts and sciences, commerce, agriculture, and manufactures, that we are destined to outstrip all the nations that have preceded us, since it must be admitted that we have already attained a position equal to that of some of the best, notwithstanding the shortness of our existence as an independent people.

The annual reports to our government exhibit resources almost illimitable, which, if properly fostered and developed, must in time place us in advance of any other nation recorded in history. It depends a great deal upon ourselves, however, whether we are to derive great benefits from the abundance with which Providence has favored us, or whether we are to hold a mediocre station in the world, and by our example give weight to the belief that republics are not lasting; that the advantages of their institutions are evanescent, and that, having no solid foundation upon which to rest, they soon fall to pieces.

To ensure success, every branch of a republican government should steadily keep pace with every other. The wants of each must increase as the country expands its boundaries and the population enlarges; like a human being passing from youth to manhood, all whose limbs and faculties are increased in an equal ratio, in accordance with the requirements of the human machine. As the population of a republic increases, its legislative bodies and judiciary are enlarged; its bureau of internal affairs grows more extensive, and its Army and Navy should keep pace with these. As regards the army, the great rebellion proved that there was no serious difficulty in

raising a sufficient force, at short notice, when required, an the world is satisfied that we can in an emergency expan our military force to any required extent.

In the present article we intend to discuss briefly the prc priety and necessity of so increasing and establishing the Nav of the United States that it will keep pace with the advanc of our country, ensure us respect from all nations, and affor our coasts complete protection from the sudden attacks of oc enemies.

Few are aware that only eighteen months since oc government came near being humiliated in the eyes o the whole world, from the fact that, on the advent of th present administration to power, it was unable to send a singl vessel to sea, as its predecessors had let everything go t decay, and there was no professional ability at the head of th navy.

During eight years all departments of the naval servic had become completely disorganized. Fine old ships, onc the pride of the nation, lay rotting at the docks; all the sinew of war, in the shape of ship-building material, had been waste on doubtful experiments, which showed the absence of a professional knowledge, and the most incapable men had crep into places of trust and profit, where they played the canke worm to eat out the heart of the navy.

It must be admitted that when President Grant came int office this was the condition in which he found the navy Whose fault it was, or what were the causes that led to it, w need not now inquire, since it is evident to the most superficia observer that a system which requires the navy to be supe vised by a civilian, who cannot possibly comprehend th wants of so intricate a department, but naturally think more of benefits to accrue to himself than of those destine to serve the country, must be radically defective.

In all countries the tendency of war is to build up mili tary and naval establishments; but we have proved a exception to the rule. Although we increased our navy

forces during the rebellion, yet at its close we were left in a weaker condition than when the war commenced; an anomaly in the case of a successful naval warfare like our own; for never, in the history of modern war, did a nation accomplish more important naval success.

We commenced the war with very few vessels of note, and the contest was nearly at an end before we succeeded in producing a vessel that could resist unharmed the fire of heavy batteries. Our fighting was performed with wooden vessels against heavy sand forts and fortified hills, in tortuous and treacherous rivers, with their uncertain currents, or on stormy coasts, where our enemies were protected by hidden bars and reefs; yet there is scarcely an instance on record where our navy failed to achieve success when it attacked a stronghold.

It has doubtless occurred to every reader of European news how little the French navy has hitherto effected against the Prussians. Notwithstanding its great iron-clads with invulnerable sides, its double-fortified guns of long range, and its rams with their crushing bows, scarcely a gun has been fired against a fortified town or a Prussian ship. The efforts of the French fleet have been confined to blockading the Elbe and Weser, and the port of New York; blockades which were raised after a short duration.

While it is very far from our intention to reflect on the want of activity of the French navy, we cannot avoid remarking that the conduct of our own navy during the rebellion presents a striking contrast. The fortifications attacked and captured by our ships were of the most imposing kind; superior, in every respect, to Copenhagen, captured by Nelson's great fleet of three-deckers; to Algiers, silenced by Exmouth; to St. Jean d'Acre, captured by the French; to Vera Cruz, by the French; superior to those guarding the passage of the Dardanelles forced by the English. All these stand in history as great naval achievements.

Against these we will place the attack on Port Royal by Dupont, with a few wooden vessels, the largest a frigate; that

on New Orleans by Farragut and Porter against a vastly superior force of guns; that on Mobile by Farragut against a superior force; that on Arkansas Post; the several attacks on Vicksburg; the battle of Grand Gulf and the two attacks on Fort Fisher by Porter; not to mention the constant skirmishing that took place between our vessels and the enemy's forts, which latter were never allowed any rest from the beginning to the end of the war.

Let the history of the rebellion be carefully studied and it will be seen what an important part the navy took in the contest, and how doubtful would have been its suppression without the aid of naval power. If ever the necessity of a navy was shown it was during the progress of our late war; and it is therefore most remarkable, with the facts in view, that the nation has made no effort to put its marine on a footing commensurate with its own greatness.

At the close of the war the navy died out as completely as if it had never existed, and it was not until President Grant was pressed to recognize the Cuban insurgents, by according to them belligerent rights, that he found that he had no force to maintain the principles at stake. "Not one ship could be got ready for sea under five months," was the answer from the Navy Department to an inquiry a short time after the President's inauguration.

There was some excuse for our being despoiled of a navy at Norfolk at the opening of the war, although when the history of that affair is published to the world it will appear that the authority which permitted the burning of the dockyard and ships was an accessory to the destruction of the navy by the end of the war; but there would seem to be no reason why a navy that had made itself so famous in war, and deserved well of the country, should have been allowed to go to such absolute decay up to the time of General Grant's accession to the presidency. Had the president accorded belligerent rights to the Cubans, our merchant vessels would have been searched on every sea; the Spaniards would have flaunted their flag in our

faces in every port, and we should have attained a position most humiliating to our pride.

To-day, fortunately, a better state of things exists. The President very properly selected an officer of the navy who had commanded our largest fleets, and was closely identified with the interests of the service, and gave him as a professional adviser to the Secretary of the Navy, whose duty, by this arrangement, was rendered much more easy.

The navy yards were at once filled with skilled mechanics, order was brought out of chaos, and good regulations were introduced in all the departments of the navy. Our old ships were renovated and made equal to new, with the addition of the modern improvements, and in less than a twelvemonth the navy arose, as it were, from its ashes, and now stands foremost among those of the world in organization and discipline, although inefficient in point of numbers. Yet, with all that has been done for it, how inadequate is it for the protection of our commerce abroad or our harbors at home! Congress in its wisdom adjourned, leaving the navy department destitute of means to increase our fighting force; for, although we have fine ships carrying our flag abroad, they are, by no means, representative war vessels fitted to cope with the iron-clads of foreign navies.

In the event of a war breaking out between the United States and a naval power, through what an ordeal would our officers have to pass, and what useless sacrifices would they be called upon to make!—for our people, generally ignorant of the composition of a fleet, and not knowing the vast difference between an iron-clad and a wooden frigate, would expect the same successes against the cuirassed ships of Europe that were obtained over the rebel vessels in the late war.

Who does not remember how Dupont and Dahlgren, two as gallant officers as ever trod a ship's deck, were criticised for their unavailing efforts to break the barriers of Charleston against a force ten times the strength of their own, and how ungenerous a portion of the press has been in attempting to

snatch from officers, who perilled their lives in the service the country, their well-earned reputations.

It can easily be imagined how restless would the people were our ships in time of war to do as little as has been do in the Franco-Prussian contest by the huge French nav Yet we fear that there would be no way of preventing su inaction in the present state of our navy, which is wholly d to the service not receiving the necessary supplies. Now, may be asked, what is the remedy for all this? The answ is plain. Let us, in this respect, take pattern by Napoleon I and the British Lords of the Admiralty. Let us commenc *de novo*, build a new navy, and dispose of the old to t highest bidder. This is the only true course to pursu We should not keep on hand what may prove to be o downfall in time of war, and will never be successful agai the navies of enlightened states.

Napoleon III. went to war because his generals led him believe that his army was the most efficient in the world. we go to war it will be with the knowledge that we are tota unprepared for a naval encounter; and although our seam will fight against desperate odds, they cannot hope for succe with the means at hand. By an examination of the Na Register it will be found that our ships bear high-soundi names, but these are applied with little discrimination iron-clads, wooden frigates, and tugs, the last-mentioned pr dominating.

In a report lately made to the Navy Department by a boa of officers, of whom Rear-Admiral Goldsborough was ti president, it is stated that few, if any, of the vessels in th service fulfil the requirements of a modern navy, or compa in efficiency with those of European fleets. Six nations ha navies far superior in size to ours, viz.: England, Franc Spain, Italy, Turkey, and Russia; while Prussia is rapid overtaking us, and several minor nations have navies qu equal to ours.

All these nations are progressive, while we are at a stan

still, having done nothing since the close of the rebellion beyond repairing the few vessels that were left slumbering in the dockyards, fair representatives of the Rip Van Winkle who, for so many years, presided at the head of our naval establishment. The navy yards are even in a worse condition than the ships, for beyond a small increase in the workshops they have made no advance in the last twenty-five years, and the channels and approaches to them are gradually filling up.

A fine opportunity occurred during the rebellion to place our navy yards on a footing with those of France and England, but the spirit of lethargy pervaded the bureau of Yards and Docks, as well as other portions of the department; the chance was lost and money enough to have built a score of dry-docks was turned into the treasury, or wasted in absurd "experiments" in steam machinery, which have been the derision of the best engineers at home and abroad.

Terrible mistakes have been made, from the fact that the organization of the navy department is defective. There seems always to have existed a jealousy against placing experienced naval officers in positions where their talents could be made available in planning or constructing the proper kinds of ships for the navy. We have pursued a system the direct opposite to that of all other nations; instead of employing official experts, we have placed the direction of naval matters in the hands of civilians.

In forming a department of Justice it would be thought very improper to place at its head a mere politician instead of a lawyer of known ability. This idea evidently influenced President Grant in carrying out the provisions of Mr. Jencke's bill, as he has exercised unusual care in the selection of men to fill the offices in the bureau of justice attached to the department of the attorney-general. A similar policy pursued towards the navy would be a preventive against future failures in that department; the best ability in the service should be made use of to save it from absolute ruin.

It is true that within the past eighteen months a great deal

has been done to place the navy in a respectable position, but this was due to the adoption of a temporary arrangement, which granted extraordinary powers—exercised with promptness and decision—to an officer of experience. The appointment of the officer alluded to was not, however, confirmed by any law, and it did not, consequently, carry with it the force that it would otherwise have done. Hence the necessity of appropriate legislation on a subject of vital importance to the navy.

One thing has been shown by the short administration of the last eighteen months, that the service has received an impetus that it had not felt before in time of peace for many years, and it is to be feared that a reaction will take place when the motive power ceases to act. We have gradually succeeded in getting our navy, small though it be, on a respectable peace footing; but it should be feared as well as respected; otherwise of what use is it among the savages of the South Pacific or the semi-civilized people of China and Japan? How little do the irascible Spaniards care for such naval vessels as we send among them?

The Government should commence afresh, and, considering all our yards and shops as complete failures, plan them anew and sell the old material to the highest bidder. Suppose that we should suddenly become involved in a war with a naval power, what folly it would be to imagine that it could be conducted on our side with success if naval men did not direct the operations of our fleets! Naval officers would then have to be called upon to advise and direct, as was the case during the rebellion. Why not call them in time of peace and let them prepare for the conflict from which we cannot, any more than other nations, expect immunity? Could we hope for success in a war with Great Britain, against the talent and experience of her Board of Admiralty, in the present state of organization of our Navy Department, divided into bureaus with imperfect concert of action, and not

presided over by a united board of professional men with the knowledge necessary to an intelligent direction of affairs?

It is a fact but too obvious, that there has never been complete harmony of action on the part of naval bureaus, but the contrary. This must ever be the case; for in building a ship each head of a bureau is anxious that his own ideas should predominate, and will carry out those ideas, if he is so disposed, by a mode of action which has heretofore been resorted to. Hence the necessity of organizing the navy department on a purely naval plan, in which all professional matters shall be settled by a professional head or board of officers, from whose decision there shall be no appeal.

There have been many suggestions made in regard to this matter, and many bills introduced into Congress, but the bills have all been defeated, either by those who had "axes to grind" or by the civilian head of the department, who naturally anticipated some reduction of his "patronage" in navy yards. And here let us ask, of what use can the trifling patronage of the government dockyards be to an administration? A few members of Congress are benefited, and the public funds are squandered to help out a few local elections. The result is that we are left year after year with a diminished navy.

Any one who reads the English naval estimates can readily see how much the Board of Admiralty could do with the twenty millions of dollars that are yearly expended under our present system. The expenditure in England, with six times our naval force, is not over forty-six millions of dollars, and with its honest and economical disbursements iron ship after ship is annually turned out and put in commission, forming a fleet with which England can to-day sweep the seas.

When the American "Monitor" stopped the way of the iron-clad "Merrimack," the English admiralty at once saw that the day of wooden ships was over, and without a moment's hesitation they set to work to supply their want of an

iron navy. That was less than ten years ago, and now England stands the first naval power in the world, while we stand only seventh; she advancing all the time, we remaining stationary!

Since the memorable fight in Hampton Roads we have spent about five hundred and twenty millions of dollars, and we have but a poor exhibit for our money, while England has only spent about four hundred and fifty millions of dollars, and has the strongest navy in existence. So much for a board of admiralty as opposed to our bureau system without a supervising board.

It was asserted by a British naval captain, who was sent to this country by his government in 1826, that our Board of Navy Commissioners, which was abolished in 1842, was the best system for organizing, building, equipping, and conducting a navy. Had we possessed such an organization at the beginning of the rebellion we should now have had the largest and best navy in the world; for the same amount of wood and iron that now encumbers the numerous vessels at our dockyards, properly disposed in the right kind of models, would have made formidable ships of war.

This is a subject that requires the mature consideration of any man who may be called upon to fill the post of Secretary of the Navy. We have had few men of naval experience in that position, and none brave enough to throw off the shackles of politics and exert their influence to reorganize the navy on a basis that will promote the harmony of all its parts.

In the present article we have abstained from entering into particulars; but we shall return to the subject from time to time, until Congress realizes its duty to the nation in regard to the navy. Suffice it to add now, that if our legislators were one-tenth as willing to make appropriations for building ships and dock-yards for the navy of the United States, for the defence of the nation and the protection of its commerce, as they are for building railroads for the benefit of speculators instead of being as we are, only a seventh-rate naval power we should soon become the first in world.

ART. IV.—*The Works of* THOMAS DE QUINCEY. Boston: Ticknor & Fields.

IT has often seemed strange to us that the works of De Quincey are comparatively so little known, both with regard to their actual merit and the extent of the field over which they range. That a writer, who has touched almost every department of prose literature and science, from political economy and theology to fiction, should be thought of by the mass of the world as the author of one book—the "Confessions"; and perhaps as a curious example, setting forth how near a man can approach the brink of perdition without being forever engulphed in its abyss, seems at first sight marvellous; yet, on examining the fact more closely, perhaps, it is not so utterly astounding.

The immense majority of people, not merely of those who content themselves with being acquainted with the outside of books and the names of their authors, but of those who profess to have a desire to "know a little" of every writer, in order that they may parade the titles of works read, would not be apt to seek in the essays of De Quincey, a name as yet unsanctified by age, and standing solely on the basis of its own merits—the rich stores of knowledge and pleasure therein contained; while, on the other hand, the "public" is most apt to seize upon and become thoroughly acquainted with the faults and defects of every man who towers above his contemporaries, at the same time that it slights or totally neglects his labors. Thousands, probably, know of Lord Bacon's corruption, who would find it impossible to name one of his works; of Chatterton's forgery and suicide, who never looked inside his book; of Marlowe's death in a tavern brawl, who never heard of the Jew of Malta, and who knew, it may be, Dr. Faustus by name only; to many John Milton is a blind man, crabbed and cross, moody and puritanical, very grand, no doubt, and wrote Paradise Lost, over which book these sympathetic critics yawn; and as for the lighter beauties of Comus and L'Allegro — why — if they ever read them, they probably examined as deeply into them as Mr. Gifted

Hopkins did into Spencer. But there is no necessity that we should pursue this train of thought any further; since all who reflect are aware that it is the greatest and most cultivated intellects, including Aristotle, Plato, and even Homer, who, in all ages, have been read by the fewest numbers; there is nothing so very astounding in the fact that so great a writer as De Quincey has been thus neglected.

When we look through the works of De Quincey we find that he has labored in the following departments of literature: historical and literary criticism, biography, autobiography, theology, history, political economy, philosophy, and fiction;* and when we consider that he has written well in all, achieved greatness in several, may we not indeed marvel?

In reading De Quincey, our attention is at once arrested by the excellence of two apparently opposite qualities—his command of the terrific and terrible and his skill in the use of lighter humor; as a good illustration of this, take the first of his papers on "Murder considered as a fine art," and observe how playfully, how prettily he trifles with so serious, so fearful a subject; observe his manner of *blaming* murder, his affirmation "that murder is an improper line of conduct, highly improper," and that he does not hesitate "to assert that any man who deals in murder must have very incorrect ways of thinking, and truly inaccurate principles." Assuredly this calls to mind the Roman noble, pictured by Ammianus Marcellinus, who, when one of his slaves is brought before him charged with murder, remarks, that "the slave is a worthless fellow *and if he repeats the offence shall not escape punishment.*" Then turn from this elegant trifling to the last paper of the same series, and remark how the "three memorable murders" are treated, and we think that this, our starting observation will be fully justified.

As the use of the first-mentioned power is very notice

* In his youth he also indulged to a slight degree in poetry, and to that he would not have been an atrociously bad poet, though not a good one.

in his works of fiction, we will consider them before passing to his other works. Let us take, then, "Klosterheim" and the "Avenger," in which he has woven together the terrible and the mysterious; with what wonderful skill does he lead on from event to event, still keeping his goal, cloud-enveloped, hidden from ordinary sight in the first-mentioned tale, maintaining the mystery to the very close of the book, and in the second failing therein only—though perhaps we judge in this case too much from our own feeling in reading it—by making his hero not a little too attractive. Of the two novels, the "Avenger" is, perhaps, the more powerful; but, to our mind, "Klosterheim" is the more artistic and the greater work. Its opening, so grand and yet so simple—a crowd collected in the streets of a not very large town; but the Thirty years' War in the background, the scenes it presents throughout the midnight bivouac, the meeting of the lovers, the prowling assassin, the spectre "who rules Klosterheim by night," the dissappearances, one after another, of citizens, the marks of violence, the ball, with music and revelry in the grand saloon, while near by is the chapel and the masked executioner, into whose awful apartment penetrate shouts of joy, then the spectre moving amidst the revellers, the discovery—all, all show the hand of a master of dramatic art.

It may be noticed in De Quincey's works of fiction, in addition to the use of the terrible and mysterious, that there is a general prevailing idea of fate, as an unseen power, leading or driving its victim onward. The extensive introduction of this idea is probably due to his intimate acquaintance with the Greek tragedy, the characteristic of which is the passive obedience of all the *dramatis personæ* to fate, which impels them to do, or forces them to suffer; and this peculiarity, so essentially tragic, well accords with the before-mentioned traits of De Quincey as a writer. There is something terrible in the very idea of a man being pushed on and on, whether consciously or unconsciously, in either case resistance alike unavailing, towards an abyss which he cannot avoid. In the

one case it is the sailor compelled by pirate captors to precipitate himself from the ship's bulwarks into the sea beneath, roaring and tossing and seething and lashing the vessel's sides, while below its troubled surface sharks and other monsters await their prey, the prisoner may struggle or he may implore, but in vain; the fierce crowd behind him press him onward, and he falls! In the other case it is the blind man, calmly and collectively walking toward the brink of a precipice, with no one near to warn him; at last he reaches the edge, and all is over. This idea of fate, as we have remarked, seems to brood over De Quincey, and was probably contracted from the study of Greek tragedy, of the spirit of which no English writer, except Sergeant Talfourd in his "Ion," betrays so large an infusion; we have taken notice of it here, not because it is manifest only in the works of fiction, for it enters into many other of De Quincey's writings, but because it is here most observable and most legitimately so.

But it is in the department, or rather the various departments of criticism that De Quincey stands out before us most prominently. As a critic he is singularly just, being one of the extinct race of whom Dean Swift speaks,—the critics who pick their way very carefully, seeing all the mud and filth before them, which they carefully point out and with equal care avoid; they do not, swine-like, stop to revel therein, while a beautiful prospect enchants their eye and unloosens their tongue. There is no meanness in De Quincey's criticism, no desire to drag down a great name, and yet no servility, no bowing down before a popular idol. A good example of this is seen in his treatment of Wordsworth. When poems by Wordsworth came first under public notice, and everybody was deriding the would-be creator of a new school, the writer, whose estimation then by the world at large may be well exhibited by a phrase used by Lord Lytton several years later, "out-babying *Words*worth;" when all were decrying this "milk-and-water poet," then De Quincey, a young man, had the courage to front the storm of popular opinion, and boldly

to proclaim the beauties and excellences which his superior taste had recognized in the despised lake-poet. Years after, when the abilities of Wordsworth were generally acknowledged from one end of England to the other, when those who had been loudest in condemnation had either become silent or swelled the crowd of adorers, De Quincey still had courage and fairness: this time to point out the numerous and manifest defects of the "Excursion," at the same time that he lauded its more numerous beauties.*

In the department of historical criticism, De Quincey has distinguished himself by his remarkable acumen. A great scholar, he was not to be deceived by false readings, a man of quick sight and strong sense, he was not to be imposed upon by any improbable theory, no matter how specious in appearance, how sanctified by age, how confidently advanced. Note, for instance, the papers on the "Essenes," how he clears up the long disputed subject. It is as if the chemicals, truth and falsehood, had in a liquid form been mingled in a vase giving a dusky hue to the whole mixture. A third element, De Quincey, is introduced, and immediately is Error, as a black precipitate, thrown down, leaving, sparkling and shining, the clear, liquid Truth to delight and to refresh.

We are aware that these essays on the Essenes are classified under the theological head of De Quincey's works, but, to our mind, they are historical, or at least historico-theological; but regard them as theological if you will, we shall find a better representative of historical criticism in "Joan of Arc." This essay is, in our estimation, one of the very finest pieces of writing in the English language. There runs through the whole of it an elevated tone; an elevation moral as well as intellectual; elevation not for the writer only, but also for the reader, for De Quincey raises you to an immense height of feeling, *raises* you,

* The *Excursion* was published in 1814. In the same year Sir F. Jeffrey made a most bitter attack upon Wordsworth. Wordsworth became Poet-Laureate in 1843; it was not until after that time (1844 or '5) that De Quincey's strictures on the *Excursion* appeared. If any one will read both critiques he will be struck by the difference. One is a mere attack, the other a dispassionate judgment.

we say, for you are conscious of no effort in following him you are carried aloft in spite of yourself.

This is the truly grand, the practically grand, for when yo sit down to read an author professedly of the grand school, b who clothes his thought in that obscurity of language which som writers appear to think a necessary concomitant of grandeu writers in whom the imagination does, indeed, "body forth th forms of things unknown," but who forget the rest of the ta of a true poet to "turn them to shapes and give to air nothing a local habitation and a name," so much effort is e pended in the endeavor to comprehend, that the vital force enjoy is often diminished in a proportionate degree.*

There is nothing of this in De Quincey; he is never unne essarily abstruse, and never abuses his great weapon, myster We were lately reading the article "Jeanne D'Arc," by th distinguished French critic, St. Beuve—whose writings abour in beauty and instruction, whose books, having once taken u you are loth to lay down, and to whose articles you object th they are too brief, much more frequently than that they a too long—and we were struck with the difference between th two men, who seem to us to hold somewhat analogous position in their respective countries. In St. Beuve there is more co dissection, and, even when he is evidently fond of his subjec his passion never carries him away; he maintains alway calm, judicial speech, as if he were a judge charging a ju with a slight bias towards the prisoner.

In De Quincey there is an equal insight into cause and effe but he does not always confine his powers, but soars above i

* We wish here expressly to disclaim any implied condemnatio writers who, from the nature of their subjects, or the effect designed t produced, have written in a style a little hard to be comprehended; any insinuation that a great writer must make his images as distinc the little moving beings in a camera-obscura, for this would destroy g deur, part of whose composition is mystery and awe. We wish m to object to those writers who endeavor to give their ideas, not grand in t selves, a factitious and fictitious grandeur, by means of involved senten points of exclamation, blanks, dashes, capital letters, etc., wherein an in ous and imaginative reader discovers more than was in the author's b also, to deprecate any unnecessary obscurity of diction.

realms which St. Beuve leaves unattempted. De Quincey is, rather, to carry out our simile, as the upright advocate who, having dilligently examined into the justice of the cause before accepting it, addresses the jury, carefully recapitulates the facts in evidence, fairly and honorably, nay, even admits what truth may rest with the opposing party, and then, firm in the consciousness of right, bursts into a torrent of eloquence on behalf of the side he has adopted. If this should seem to any persons not to be true criticism, and if they would confine that title to the extraction of the isolated beauties and defects of a cause, without putting them together again; in a word, to analyze without synthesis, we beseech them to take the etymology of the word and recollect that the κριτης judged of the whole cause as a unit and not merely of its details, and it is very likely, especially among the excitable Athenians, that a κριτης may have shown considerable feeling in giving judgment. Indeed, we need not go back to ancient history to find a judge expressing his own opinion; such a case occurred not long ago. A bequest was made to a society not yet in being, to be known as the "Infidel Society," whose object should be to disseminate infidel principles. The will was disputed, and the judgment thereon was pronounced by a jurist of whom the whole land has reason to be proud. He, after declaring the legacy void because of the non-existence of the legatee, went on to say that, had the legatee been *in esse*, he, the judge, would still have declared the devise void as being immoral. Now, to establish his judgment, it was sufficient that he should have alleged the first ground; but will any one say that the judge violated his duty in making the subsequent declaration?

So, in the same manner, a critic, after giving judgment on critical principles and canons of taste, has, we think, a right to carry his auditor with him, to make him enjoy what he has enjoyed. But, as a critic, De Quincey did not resort to appeals to feeling and passion *to blind* his readers; he used his power sparingly, and if you wish an example of quiet,

historical criticism, with scarcely a wave of passion, turn to his essay on Cicero. Here he carries analysis to the very thoughts of the man, and, mark you, he was never deficient in analysis; he could dissect as skillfully as the most determined "cutter up," but he put together again and rarely left dismembered fragments.

In passing, we must call attention to the essay on the "Antigone" of Sophocles; and one reason for so doing is that it gives the best idea of the Greek tragedy that we have met with in English literature; and we advise any one, who wishes to obtain a proper conception of that most interesting branch of ancient literature, to read this essay carefully. We must also call attention to the "Sphynx Riddle as an essay of exceeding beauty and ingenuity, and then proceed.

We come now to the essays on the philosophical writers. Here De Quincey displays great intimacy with their writings, and yet does not make of his essays mere dry reviews, but works the personality of his subject into his deeds and compositions. In one of these essays a little political feeling is betrayed; the one we allude to is that on Dr. Parr, who is handled in a very severe manner. Now while we believe that Parr was a greatly over-estimated man, and that the comparison of Dr. Johnson (crabbed and narrow, but brave and honest) to Parr is "Hyperion to a satyr," yet we think that, had Dr. Parr been of the other side of politics, he would have been treated much more tenderly, or perhaps not written upon at all. This idea is much strengthened when we observe how, in another part of his works, De Quincey has dealt with another illustrious Whig, Sheridan, whom he characterizes in one word as a "charlatan." This, it does not require a great amount of mental insight to see, is shockingly, horribly unjust; and one cannot but wonder to what place De Quincey's usual fairness had been banished when he wrote the three pages which, under Rhetoric, he devotes to England's most brilliant orator.

charlatan, he who wrote the "School for Scandal" and the "Rivals?" A charlatan, he who, side by side with Burke and Fox, upheld British liberty in parliament against ministerial aggression, while Erskine battled before juries in the same good cause? A charlatan, he who made those two grand speeches in the Hastings case, during which the governor-general confessed that he felt himself a guilty thing? A charlatan, indeed, who was dangerous, since, after a speech of his, Pitt refused to allow a vote to be taken until next day. No; this can hardly pass without censure from any one who has enjoyed Sheridan's plays, or who has read, without being previously blinded by passion, his speeches.

But this is a digression. The other philosophical writers upon whom De Quincey has written are: Hamilton, Kant, Mackintosh, Herder, Richter, Lessing, and Bentley. The essay on Bentley is a noble work, and the account of the Phalaris controversy shows how a genuine scholar, who loves learning and wishes to make others love it also, can render what at first sight seems a dry and unpromising subject replete with interest, not only to the learned, but to all who admire ingenuity and talent displayed in the detection of error or in the management of a dispute.

Before leaving criticism, we must notice the "Essays on the Poets and other Writers," which is, properly speaking, a series of compromises between criticism and biography—at times, as in the essay on Pope, leaning toward criticism; at other times, as when Hazlitt is the subject, toward biography. To our mind, the finest of these essays is that on Shelley—poor Shelley, whom we all wonder at, and yet pity, love, and still recoil from. On this part of our subject we might spend a long time, were time ours to spend; we might look at De Quincey's opinion of Pope, and remark how far it agrees with those of Lord Carlisle, the Rev. F. W. Robertson, and others who have dissented from the universal veneration in which Pope, not very many years ago, was held, and to which Lord Lytton was still a slave at the time of the publication of his,

to our mind, best poem by far—the "New Timon," in which he asked:

> "Am I enthralled but by the sterile rule,
> The formal pupil of a frigid school;
> If to old laws my Spartan tastes adhere,
> If the old vigorous music charms my ear,
> Where sense with sound and ease with weight combine
> In the pure silver of Pope's ringing line?"

With all due respect to his lordship, we would answer "Yes," and, diffident with regard to our own merits, appeal to the distinguished critics before mentioned, as it is foreign to this article to discuss the question; especially as attacking Pope *now* is very much like "hitting a man when he is down." But still, honor is due to those who fearlessly pointed out his defects while he was at the height of his popularity, and who thus rescued our literature from the domination of a "correct school," which reminds us, in spite of its greater refinement and the ability of its disciples, of the correct school of Hans Sachs.

We feel impelled here to enter our protest against the low opinion which De Quincey avows concerning Göthe. We are not worshippers of Göthe, like Carlyle; but we cannot agree with De Quincey that he must sink for two or three generations before he reaches his proper level. It seems hard to say this of the man who, if he had done nothing else, has written Faust and created Mephistopheles; for, although Marlowe has used the story of Faustus before Göthe, and has made from it a grand poem, it contains no such subtle fiend, no such incarnation of selfish, cultivated intellect, hard and cold, as is shown in Mephistopheles. It is unjust, also, to speak thus of the man who has given us such noble views of life, and who has taught us, with so great emphasis, that man has here a duty to be considered higher, far higher, than his mere happiness,—

> "Sed fugit interea, fugit irrevocabile tempus,
> Singula dum capti circumvectamur amore."

Quincey has left behind him, in the "Opium-
"Memorials," Literary Reminiscences," and "Auto-
hical Sketches" an account of his life and times.
first-mentioned work we shall not touch, since, as that
ork by which De Quincey is known to most people,
unt of it would be superfluous in an article whose
s to call attention to generally-neglected beauties.
Memorials" relate principally to the author's boyhood,
e, as well as in the "Autobiographical Sketches," he
he reader into his confidence. In the "Reminis-
he introduces to us all the prominent members of
ke school, with whom he had every opportunity of
ig acquainted; possessing a mind scarcely inferior to
atest of them—of a genial, good-hearted nature—his
would naturally be sought by kindred spirits, and his
uld go out in friendly greeting wherever he discov-
a spark of genius. Then, too, in a country so thinly
as the Lake region, each individual is more dependent
single neighbor for society and pleasure than in a city,
he can rove from one acquaintance to another; conse-
, in the country he is obliged to become acquainted
e peculiarities and idiosyncrasies of each associate, in
e of minuteness almost impossible in a city. Further,
a country as the Lake region, with its wild grandeur,
s, ghylls, tarns, the mind of man is naturally lifted
n a contemplation of the glorious works of God to
ivine Creator; it is filled with noble thoughts and
ions which impress themselves upon the speech;
nsequently, there man is known at his best.

Quincy's recollection embrace Davy, Godwin, Mrs.
Lamb, Coleridge, Wordsworth, Southey, Walking,
, Edward Irving, Talfourd, Clare and Cunningham.
ning the lakers, he is, as is natural, much more full
ith regard to the others. His account of Wordsworth
rhaps surprise those who have formed their idea of this

poet from his writings, from the calm catholicity of t
"Excursion," or from such lines as the following:

> "Where'er we roam—along the brink
> Of Rhine, or by the sweeping Po,
> Through Alpine vale, or Champaign wide,
> Whate'er we look on—at our side
> Be Charity to bid us think
> And feel if we would know."

for we are told that Wordsworth often manifested co
tempt for those who were, or whom he fancied were, inferi
to him mentally, and that even our author did not escap
But how exquisitely in these pages stands out Charles Lam
—how every beauty of that unfortunate man is brought befo
our eyes; his touching story, noble self-sacrifice, geniali
hospitality, wit; so that, after reading De Quincey's sket
of Lamb, although we are still inclined to dissent from t
general estimation in which he is held as a writer, we cann
refuse our admiration to a man whose very weaknesses see
to make him more loveable.

We have said above that De Quincey is distinguished
a command of light humor, and in order to substantiate t
assertion referred, cursorily, to "Murder considered as a Fi
Art." The structure of this work deserves a little clos
examination, and well it repays it! Let us then look at
points. In the first place the letter from the indigna
and terrified supporter of public morals, his description
the horrible society organized for the promotion of murde
the professor's defence of the society at the opening
his lecture, his ingenious arguments for the propriety of
existence, present a combination of wit and humor rare
equalled. Then his account of the history of the *art* of murd
from the time of its inventor, Cain, for whose style, d
tinguished for boldness rather than delicacy, the profes
sees fit to apologize, but of whose merits, as inventor,
insists upon the fullest recognition, to the day of Mr. W
liams; his cool assertion that all great men have been mu

dered, the proofs thereof fill up this paper, and make it, in itself complete—one of the best specimens of humorous and witty trifling in the language. Indeed, we know not a single like piece which exhibits so much fun and merriment, without anything low or vulgar, which handles so triflingly a grave subject without offending good taste. The nearest approach to it that we can at present recollect is the witty humor* of Washington Irving, but even that, in our estimation, falls short.

But De Quincey does not stop with this first paper; he has reaped only half his harvest; so he gives a second part, in which he describes the dinner given by the society in honor of Williams; and such a description! such an exuberance of racy humor, uproarious fun! In a few minutes the whole scene is painted; we see the wine-descending spirits proportionately ascending; the company becoming more and more talkative, more and more noisy; the delight at the achievements of the gentleman in whose honor the dinner is given less and less masked, and hear ever and anon the chorus resounding,

> "Interrogatus est, a toad in-the-hole,
> 'Ubi est ille reporter?'
> Respondunt omnes cum cachinno
> 'Non est inventus.'"

with about as much attention, time, and tune as is paid to *Gaudeamus* when sung by a party of university men at midnight, after liberal potations.

We shall not enlarge upon the third paper of this series: it is not humorous, it is terrible; it is of fearful, wonderful power—too powerful, in fact, to be enjoyed save by a person of strong nerve. We now pass on, and come to a work which seems to stand alone; and we unhesitatingly pronounce it without an equal in its kind in English literature—namely,

* We use the words "witty humor" advisedly, as distinguished from genial humor, the humor into which an ingredient of pathos enters—and here Irving has few, if any, rivals at the present day; if we wish his superior we must go back to Sterne or Goldsmith.

the "Glory of Motion," under which title we include merely the paper bearing that name, but also the two s ceeding papers, "A Vision of Sudden Death" and "Dream Fugue."

How prettily, how quietly does this series open! From glorification of the ancient stage-coach—an argument upon t relative degrees of respectability possessed by the inside a outside, a description of the manner of travelling—we a gradually drawn on further and further, until we feel oursel journeying with our author, see him jump from the top, a watch his sly flirtation with the buxom lass of the roadsi inn, the coachman's granddaughter, while the horses are bei changed—then tara-tan-tara-tan-ta! the guard's horn; eve one to his place, and away dash the horses with speed incre ing every moment, and hardly anything is heard but the c cided fall of their feet upon the well-kept road. We are or reading, it is true, but we soon find ourselves in such compl sympathy with our author, that we almost seem to be movi and recognize fully that there is a glory in motion.

We never had the truth of De Quincey's descripti brought so vividly to our minds as one summer, in the Wh Mountains. In these days, when railroads have driven aw coaches, we do not enjoy motion, because we are hardly c scious of it; we sit in a room, and are carried along wi almost as little feeling—that is to say, on a good road—as Huon of Bourdeaux experienced during his transportation Tunis. Owing to the general prevalence of railroads, we h had but little experience in stage riding, except a few drea drags to watering-places from railroad-stations, where two at most four poor horses pulled along an overloaded coac but the hand of art, especially inimical to romance, h not invaded the roads of the White Mountains, and wh we left the cars at Littleton the stages were awaiti us—large houses on wheels, each drawn by six lar splendidly-built horses. We were fortunate enough to secu a top seat. The sun was beginning to sink, and a glorio

sight it was, there, with the mountains into which we were going standing out before us, rearing themselves proudly, inviting yet filling with awe. Soon we started, the sun sinking lower and lower, the colors on the hills changing, moment by moment, from deep to deeper. We drove on at a steady trot, a pleasant motion; but on arriving at a declivity, confronted by a corresponding descent, the driver gave the reins to his horses, and away went those six noble animals—down one hill, up the other, like the wind. Then we had called to our mind De Quincey's "Glory of Motion,"—there, amidst the grand scene, where grand thoughts only should enter, and the harmony of the scene was not marred. Let us notice, too, in this first paper, the "going down with the victory," and we see added to the exhilarating effects of motion those of patriotic joy, and observe at the same time the touch of nature, the exquisite pathos shown in the introduction of the poor woman whose son was in the —th Regiment.

If the first paper raises us to the pitch of joyous excitement, the second exhibits the excitement of fear and alarm, and of the most thrilling kind. We find ourselves upon the coach-top—for our author has taken us there, and will not let us depart—see the horses plunging into the night, the coachman sleeping, and then suddenly bursts upon our sight the fragile carriage with the two lovers, unconscious of the approaching danger. Nearer and nearer draws on the giant, closer and closer to the unfortunate pair comes destruction; our endeavors to awaken the coachman are unavailing—then comes the warning shout, almost too late—the energetic action of the young man—the fear, the agony of the young lady—then the awful moment in which we hold our breath—and finally the mingled exhaustion and relief as the coach passes on and the threatened lives are safe!

As an appropriate conclusion to the foregoing papers comes the "Dream Fugue;" and if one should search through the whole English vocabulary, and use Dr. Johnson's privilege of invention or naturalization in addition, he could hardly find

a title more expressive of the work. It is in very truth fugue-vision, chasing vision: wild, yet solemn; terrifying, y with lulls in the terror which reconcile us to it—lulls durin which we gaze upon a calm and placid heaven; and then our eyes are becoming accustomed to the sight, the sky darkened, the thunder peals, angry clouds sweep over head or rather it is as if we were looking on the bright surface of mirror like Cagliostro's, pleased with the scene before u when the surface is clouded, and when the film clears awa another picture stands before us—a picture of horror an desolation.

This is all we shall say, for the present, about D Quincey's writings. We have only been able to pick a flow here and there, and yet our article has extended itself to quit a pretentious size. In conclusion, we will merely look at th man himself, as known from his works and especially in con nection with his struggles with opium.

Many very good, but unthinking, persons are apt utterl to condemn a man who has fallen into the practice of any vic without making the proper allowance for the general weakne of man, or inquiring into the peculiar circumstances of diff culty and temptation by which the particular individual ma was beset. Condemnation with some is only made mo strenuous when the man condemned happens to be one genius, a shining light, an *avant-courier* in the march human progress; "for," argue these worthy people, "a ma gifted with extraordinary talents ought to be very careful the manner in which he wastes them, he should consider th effect of his example; therefore we are justified in judging great intellect severely." That is your side of the case; ver well, we will now bring forward ours. In the first plac consider that when a man has done a certain amount of goo in his day and generation, it is no more than decent that certain leniency in judging of his faults should be exercised b the high and mighty sovereign—the world. "Oh, but h might have done so much more had it not been for this pe

nicious vice." Yes, so he might; but at present consider what he has done actually, and remember that while we are all, as considered in our service to God, unprofitable servants, yet some have done enough for the world to command its eternal gratitude; and that this very man may grieve as deeply over his non-attainment of the high standard proposed to himself as you can grieve for him, and condemn himself with much more bitter humiliation than his most determined enemy or most censorious judge can inflict upon him. Therefore, out of gratitude, make his woes as light as possible; honor him as far as you can.

Now, on the above ground, that of good done, we claim indulgence for De Quincey; for the whole tone of his writings is pure, high, noble, and Christian. But we rest not his case here; we have another defence, and that is, circumstances. Driven to London, a man in learning while yet a boy in years and diffidence, he fell into great misery, was dependent for his very food, from day to day, upon the kindness of a not very reputable character, who was hiding from his creditors; and the little food he received, the leavings of this man's breakfast, was shared with a poor child who inhabited the same house, as wretched, were it not for mental torments, as himself. De Quincey, the greater part of the time, was suffering from hunger, frequently almost starving; he felt the pangs of famine gnawing at his very vitals. Suffering agony, which lasted after its immediate cause was removed, who can blame him for resorting to that which relieved, at least temporarily, his pangs, and drowning his unhappy reality in a blissful dream? And if, O most stern judge, this does not to a very great extent palliate the accused's guilt, consider, if you please, his final victory over the oppressor Opium, achieved after years of battle, brave and resolute, now one, now the other gaining the upper hand; and consider, too, the frightful penalty paid by him in the misery entailed upon him by this pernicious habit, and then condemn him if you can.

There is still another reason why we should bear with this weakness of De Quincey; namely, that it is due to his suffering that we have many of his works. Perhaps we may go further and say that, without suffering, he never would have risen to the elevation of tone which distinguishes him. It is a noteworthy fact that many of the greatest works known to the world have been produced by suffering. Your evenly prosperous man may be pretty and, after a manner, grand, but he cannot rise to sublimity, he cannot fathom the heart's depths; he has never been in those regions himself, how then can he show them to us? Other great writers—Homer, Dante, Tasso, Shakspeare, Milton, Schiller—did not lead lives of unbroken prosperity. They knew the dark valley of sorrow and woe as well as the sun-lit mountains of joy and success.

The truly great writers, then, as well as the great musicians, knew life in all its forms; and they have brought forth accordingly: they have written for all time, and will be loved to all time. On these three grounds we rest our defence of De Quincey: the work brought forth by suffering; the circumstances by which he was surrounded; and the good done by the noble and Christian tone of his writings. And, as when from the top of some lofty mountain we let our eye wander over the vast prospect spread out before us, we are unable to perceive the low hovels, the sluggish pools, the ditches, the muddy roads, the mire, because we are occupied in observing the noble hills, the far-reaching valleys, the rugged grandeur of the rocks, the dashing spray of the cataract; or, if in the distance appears a city with magnificent temples and shining roofs, the mighty work of civilization standing side by side with the work of nature, each heightening the effect of the other—so, in regarding a great intellect, his foibles, faults, errors, nay, even crimes, should sink into insignificance, and we should delight to behold only his glories and excellences.

ART. V.—1. *Elements of Geology.* By Sir CHARLES LYELL, F.R.S. Greatly enlarged and illustrated with 770 woodcuts. 1 vol. 8vo., pp. 803. New York: D. Appleton & Co. 1866.

2. *Theory of the Earth, with Proofs and Illustrations.* By JAMES HUTTON, M.D., F.R.S. 2 vols. 8vo. Edinburgh. 1795.

3. *Traité Elémentaire de Géologie.* By M. ROZET. Paris. 1835.

4. *The World Before the Deluge.* By LOUIS FIGUIER. The Geological Portion carefully revised and much Original Matter added. By HENRY W. BRISTOW, F.R.S. Illustrated. English Translation. 8vo., pp. 449. New York: D. Appleton & Co. 1869.

5. *Primitive Man.* By LOUIS FIGUIER. Revised Translation. Illustrated with 30 scenes of Primitive Life, and 233 figures of objects belonging to Pre-historic Ages. pp. 348. New York: D. Appleton & Co. 1870.

6. *Illustrations of the Huttonian Theory of the Earth.* By JOHN PLAYFAIR, F.R.S. Edinburgh. 1802.

SCIENCE is founded on the unchangeableness of the laws of nature. Were the laws which control natural phenomena not thus fixed, the facts of to-day and those of to-morrow could not be compared with any certainty of arriving at a correct conclusion respecting the facts which had been, or might be, observed on any other day or at any other period. Although we occasionally hear some express doubts with respect to the fixed character of natural laws, yet we find people instinctively basing their conclusions in relation to *future* natural phenomena on the invariableness of those laws which control them. But if we assume that the laws which control any class of phenomena, mental or physical, are the same at all times, past, present, and future, we may reason upon the facts ob-

served at any time, and deduce satisfactory conclusion respecting that part of the universe to which the phenomen relate. All the sciences are based upon this assumptio Even language, apparently the most changeable in its deta of all things, is known to be subject to the same fixed law The full recognition of the truth that all natural laws are fixe never have been, never will be, and, perhaps we ought to say never can be changed, will save mankind from many a error of reasoning, and it will serve as the surest guide, othe necessary data being given, to the great truths of nature No one thinks of raising a doubt about the invariablenes of what are known as astronomical laws, nor of the know laws of mechanics and other branches of natural philosophy But grave doubts are sometimes raised respecting the fixe nature of moral and religious laws. In other words, ma doubts the unchangeableness of such laws as he knows leas about.

But let us see what light abstract reasoning will throw o this question of the fixed character of the laws of nature We are sometimes told that all things are possible with God That is, to an infinite being all things are possible; a moment' thought, however, will tell us that some things, at least, ar impossible. Thus, two things cannot occupy the same plac at the same time, nor can one thing occupy more than on position at one time; a thing cannot be round and square a one time, and so on, for others. But these are so plain, tha the reverse seems absurd. It is also as easily seen that twic one make two, and it is impossible for it to be otherwise But it is not so apparent that the sum of the three angles o every plane triangle is equal to two right angles; still, a cer tain course of reasoning demonstrates the truth of the propo sition, and we learn that it is impossible for it to be otherwise We learn further, that all mathematical laws, of whatever kind are fixed laws; we know that these mathematical laws correctly represent the laws of nature, so far as we have yet been abl to apply them to the tracing out of the phenomena of th

natural world. May we not then conclude that, so far, at least, the laws controlling the phenomena of the physical universe are equally fixed? If we would spread a given quantity of liquid over similar surfaces, the amount on any given space would be regulated by Newton's law of gravity. As the mind and body of man are each subject to laws peculiar to itself, so the mental and the physical universe have each its own peculiar and inherent laws by which they are controlled and adapted to each other.

Among the sciences, none seem to ask for greater admissions in relation to what we have said of the unchangeableness of nature's laws than geology. The forces which produced, and still produce the phenomena observable in the crust of the earth, may have been greater during one period of the world's physical history than at another, but still they differed in no other respect. Geology, as a science, is of comparatively recent date, because it took man many centuries to learn the great truth which we have stated respecting the laws of nature, and that the only method of arriving at absolute truth is to observe facts, and to investigate their relation to one another.

Astronomy is the most sublime of all the sciences, because it takes in the physical universe as a whole, and investigates the laws which control it, the influences of one part on another, and the forms of bodies in their entireness. Next to astronomy, for the magnitude and sublimity of the objects which it considers, we must rank geology, since it treats of. and investigates, the formation and structure of a world—the earth. The former science takes our world when, at some remote period of past time, with the other members of our solar system, it was floating as a shapeless, gaseous cloud through cosmical space, traces its changes of form and constitution till, in a spheroidal shape, it turned on its axis, and at the same time was carried around the parent sun by the central attraction of that great luminary, and the impulse which it had received according to the laws of condensing bodies. At this period in

its formation, and when it was still liquid from the action of heat, the science of Geology takes it and traces the various changes through which it passed in the process of cooling—the formation of a crust, the irregularities of surface, the upheaval of mountains, the separation of the ocean from the land, the changes produced in the conformation of these by the wearing down of the solid parts by the action of the air and water, the building up of islands and coasts by the coral insect, and the other changes to which it has been subject through immense periods of time, till it was fitted for the habitation of man, and even down to the present moment.* Thus we see that geological science but continues the investigation of those laws and phenomena in detail which astronomy recognized only as a whole. We readily infer that the former science has had, and still has, many difficulties to encounter, owing to the impossibility of making observations in all parts of the earth, with which the latter never had to contend.

Geology may be further defined as the science which investigates the changes which have successively taken place in the inorganic and the organic kingdoms of nature, the causes of these changes, and the influence which these have had in modifying the surface and external structure of the earth. In this science we cannot draw our data from historical records, but we must observe all, or as many of the facts as may be presented in different regions of the earth, and then, for further information, we must extort from nature, by experiment, what she does not so readily yield without it. It is by observations of this kind that we have to assure ourselves that there exists the true materials for a physical history of our planet. We see in the sand or chalk-pit, the stone-quarry, or any place where the rocks are laid bare, an order of arrangement, which, if studied, would throw much light on the structure of the earth. "But it may be said, and with great reason, that the mere fact of order in the arrangement of these superficial materials proves nothing more than that they were deposited in

* See Figuier's "*Primitive Man*," ch. i.

succession, and they might either have been so placed at the first creation of the world, or, since the whole bears marks of aqueous action and of disturbances, that the successive beds may have arranged themselves as we find them during some great deluge. But the possibility of this is contradicted by appearances presented to the observer of nature at every turn, and by the result of every investigation, however superficial, when the actual structure of the earth is laid open, whether in the quarry or the sea-cliff."*

Man, in all ages of the world, since his advancement in civilization has enabled him to leave a record of his thoughts, has sought for the origin of things. Usually, however, instead of observing the phenomena of nature to see what they indicate, he has been more disposed to frame hypotheses as to what nature was supposed to conform. Some of these, whose origin dates many centuries back, have descended to us, and they are still regarded by many as giving the true history of creation. In India and Egypt the earliest doctrines of their schools of philosophy agreed in ascribing the first creation to an infinite Being. They represented this Being as having existed from all eternity, and many times destroyed and reproduced the world and its inhabitants. "There are creations, also, and destructions of worlds innumerable; the Being, supremely exalted, performs all this with as much ease as if in sport, again and again, for the sake of conferring happiness."† Whatever may be our opinion respecting these statements, the ordinances of Menù do contain some astronomical facts, and we see some foreshadowings, as in the above passage, of a knowledge of geological principles and revolutions. Fossil remains in the different strata of rocks are so abundant, that they could hardly have escaped the notice of the observers of nature among the eastern nations. It is known that the Egyptian priests knew not only that the soil

* Anstiel's *Ancient World*, p. 21. See also Figuier's "*World Before the Deluge*," p. 29 *et seq.*

† *Institutes of Hindoo Law; or, the Ordinances of Menù;* from the Sanscrit. Translated by Sir William Jones.

beneath the plains of the Nile, but also the hills bounding the great valley, contained marine shells.* "But although the Bramins, like the priests of Egypt," says Lyell, "may have been acquainted with the existence of fossil remains in the strata, it is possible that the doctrine of successive destructions and renovations of the world merely received corroboration from such proofs; and that it may have been originally handed down, like the religious traditions of most nations, from a ruder state of society. The system may have had its source in exaggerated accounts of those partial, but often dreadful, catastrophes which are sometimes occasioned by particular combinations of natural causes. Floods and volcanic eruptions, the agency of water and fire, are the chief instruments of devastation on our globe."†

According to Chinese tradition, there was an extensive flood in their country in the period of Yaou, two thousand years before our era, which, according to some persons, is the same as the Deluge described in the Old Testament;‡ but, according to Mr. Davis,‖ the Chinese flood rather interrupted the business of agriculture than involved the general destruction of the human race. According to their record, the flood was nothing more, very probably, than an aggravation of the natural condition of these low countries through which the Yellow river and canal now flow. "Were they," says Davis, "both of them to burst their banks at present, the deluge of Yaou would be repeated." Humboldt found in South America that "the Indians celebrated, after the ideas of an antique superstition, by festivals and dancing, the destruction of the world and the approaching epoch of its regeneration.§

These accounts will serve to show that different nations in the early ages of the progress of thought, probably saw sufficient indications in the structure of the earth of great revo-

* Herodotus' *Euterpe*, 12. † *Principles of Geology*, vol. i, p. 22.

‡ See Figuier's "*World Before the Deluge*," p. 424.

‖ *The Chinese*, by John Francis Davis, Esq., F.R.S., vol. i, p. 180.

§ Humboldt and Bonpland, *Voy. Relat. Hist.*, vol i, p. 80.

ions in nature, which had important bearings on the welfare f the human race. We find similar ideas respecting the laws hich govern the universe among the ancient Egyptians, amely, the former successive destruction and renovation of he world on which we live.*

Strange as it may appear, we find the idea, which is still xtensively entertained of man's fall, or at least gradual de- line from a state of moral purity and happiness and his ubsequent great wickedness, which was followed by his estruction through some great calamity in nature, existing mong the ancient Egyptians. This connection between oral debasement and physical catastrophes is more intimate id natural than we might at first suppose. Man, when norant of the laws by which the universe is governed, re- rds himself as the special object of attention of the Governor the world, and that the transgression of his moral laws is ited by some punishment which frequently takes the form physical calamities that oftentimes result in great revolu- ns in the conformation of the earth. The progress of knowl- ge has scarcely yet dissipated these absurd notions. A pectable writer on moral, educational, and scientific sub- ts, of the former half of the present century, speaks of thquakes and volcanoes as being the result of the "fall of n." Even geologists, that wrote about the same time, ributed to the Noachian deluge—a consequence of man's l and moral depravity—many of the phenomena of the ysical structure of our globe, now classed under the head drift.

According to Ovid,† the doctrine of Pythagoras was that nothing perishes in this world, but things mostly vary and nge their form." Some of his illustrations are as follows: Solid land has been converted into sea, and sea has been anged into land. Marine shells are found far from the ocean. alleys have been excavated by running water, and floods ve washed down hills into the sea. Springs have been dried

* See Prichard's *Egypt. Mythology*, p. 177. † *Metamor*, lib. 15.

up and new ones formed during earthquakes. Rivers have deserted their ancient beds and have flown elsewhere. Islands have become connected with the main land, by the growth of deltas. Peninsulas have been divided from the main land, and have thus become islands. Land has been submerged by earthquakes, and numerous other changes are mentioned, showing an actual knowledge of natural phenomena."

We find also that Aristotle and Strabo both possessed many correct ideas respecting the changes which the earth's surface has experienced, and which are still going forward. The former says that the distribution of land and sea in particular regions does not always remain the same, but that the sea changes into land and the land becomes sea. The latter, after examining some of the theories then entertained by different philosophers to account for the changes observable in the conformation of the land and water, and finding them insufficient, propounds one of his own, which geologists now recognize as true to nature. He says that the same land is sometimes raised up and sometimes depressed, which causes the sea to change its bed and thus expose its bottom to observation.

We have now given in brief the opinions entertained before our era respecting the revolutions which the earth had undergone. We see that hypotheses, rather than the results of observations, constituted the principal geological knowledge.

After the fall of the Roman empire, the Saracens became the cultivators of physical science in the old world. Geology as well as astronomy is indebted to their exertions to extend the domain of scientific knowledge. A few only of the early Arabian works have descended to us. A treatise "On the Formation and Classification of Minerals," by the learned physician Svicenna, and another "On the Cause of Mountains," which forms the second chapter of the same work, speak of mountains as having been formed, some by essential, and others by accidental, causes. "A violent earthquake, by which land is elevated and becomes a mountain," is an essential cause; and among the accidental causes he

es as the principal, the excavation of valleys by water, ich the land is made to stand out and form eminences. Arabian writers added something on geological phe- a, especially Mohammed Kazivini, who flourished about se of the thirteenth century of our era. In his work, d the "Wonders of Nature," is found the following very ful passage, the narrations of Khidhz, an allegorical age. We copy it as given by Lyell:

assed one day," says Khidhz, "by a very ancient and wonder- pulous city, and asked one of its inhabitants how long it had unded. 'It is indeed a mighty city,' replied he—'we know not g it has existed, and our ancestors were on this subject as igno- ourselves.' Five centuries afterwards, as I passed by the same could not perceive the slightest vestige of the city. I demanded sant, who was gathering herbs upon its former site, how long it n destroyed. 'In sooth, a strange question,' replied he. 'The here has never been different from what you behold it.'—'Was t of old,' said I, 'a splendid city here?'—'Never,' answered he, as we have seen, and never did our fathers speak to us of any On my return there, five hundred years afterwards, *I found the he same place*, and on its shores were a party of fishermen, of enquired how long the land had been covered by the waters. a question,' said they, 'for a man like you? This spot has been what it is now.' I again returned, five hundred years after- nd the sea had disappeared. I enquired of a man, who stood on the spot, how long ago this change had taken place, and he the same answer as I had received before. Lastly, on coming ain after an equal lapse of time, I found there a flourishing city, pulous and more rich in beautiful buildings than the city I had first time; and when I would fain have informed myself con- its origin, the inhabitants answered me: 'Its rise is lost in remote y: we are ignorant how long it has existed, and our fathers were subject as ignorant as ourselves.'"

ology did not seem to attract the attention of Christian s till the earlier part of the sixteenth century. Marine then gave rise in Italy to a spirited controversy respect- eir origin, and it extended also to other organic remains in the strata of that peninsula. An idea prevailed to extent at that time that a certain "plastic force" had

the power to transform stones into organized fossils. Fracastoro exposed the absurdity of this notion, and gave it as his opinion that all fossil shells had once belonged to living animals. He also demonstrated the futility of attributing to the Noachian deluge the situation of the organic remains in question—an hypothesis obstinately defended by many. These two problems—whether organized fossils had ever belonged to living animals, and, if so, whether they had been deposited by and during the Mosaic flood or not—notwithstanding Fracastoro's clear exposition of the evidence in relation to the questions, continued to be discussed for three hundred years longer, or till the beginning of the nineteenth century.*

The discussion on fossil shells and other organic remains brought into the field many writers on the subject; and instead of appealing to the observation of facts as they are presented in nature, some of the most absurd theories were proposed and attempted to be sustained by their authors, simply by the force of reasoning from assumed data. "The theologians who now entered into the field in Italy, Germany, France, and England," says Lyell, "were innumerable; and, henceforward, they who refused to subscribe to the position that all marine organic remains were proofs of the Mosaic deluge were exposed to the imputation of disbelieving the whole of the sacred writings. Scarcely any step had been made in approximating to sound theories since the time of Fracastoro, more than a hundred years having been lost in writing down the dogma that organized fossils were mere sports of nature. An additional period of a century and a half was now destined to be consumed in exploding the hypothesis that organized fossils had all been buried in the solid strata by the Noachian flood. Never did a theoretical fallacy, in any branch of science, interfere more seriously with accurate observation and the systematic classification of facts."† The rapid progress which geology has made in

* See "*World Before the Deluge*," p. 269 *et seq.*

† *Principles of Geology*, vol. i, p. 42.

recent times is chiefly attributable to the careful determination of the order of succession in the strata, by means of their different organic remains, and to their regular position.

We must now pass over more than a century in the history of geology, by doing little more than mentioning the names of the principal individuals who contributed, either by their observations or their writings, to the progress of the science.

The great mathematician, Liebnitz, published his "Protogæa" in 1680. He imagined a time when this world was a burning, luminous mass, and that it has been refrigerating ever since its creation. This hypothesis, corresponding very closely with the modern theory, of which more hereafter, we need not enlarge upon here. The distinguished mathematician and natural philosopher, Robert Hooke, wrote and lectured considerably on the subject of geology. He says: "However trivial a thing a rotten shell may appear to some, yet these monuments of nature are more certain tokens of antiquity than coins or medals, since the best of these may be counterfeited or made by art and design, as may also books, manuscripts, and inscriptions, as all the learned are now sufficiently satisfied has often been actually practised."* He argued, also, that nature had not formed fossil bodies "for no other end than to play the mimic in the mineral kingdom," but that they are what they appear to be—"the several bodies they represent, or the mouldings of them petrified."† Hooke declared the prevailing hypothesis of the day—namely, that all marine fossils were to be referred to Noah's flood—to be wholly untenable, and, in its stead, he proposed another equally as unfounded in nature.‡

Burnet, Ray, and Woodward, contemporaries of Hooke, also wrote about the formation and structure of the earth; but as the deluge of Noah was called in to explain the greater part of geologic phenomena, we need not refer to their the-

* Posth. Works, Lecture, Feb. 29, 1688.

† Lecture, Feb. 15, 1688. ‡ See his Posth. Works, p. 410.

ories, especially since geologists long ago became satisfied that no historical flood has had any influence in the production of the phenomena observed in the earth's crust. But we must not omit to mention Whiston's fanciful hypothesis, which was proposed about the same time (1696), to account for the deluge of the Old Testament, that catastrophe being the cause of those phenomena which we observe in the crust of the earth. It is well known that the great comet of 1680 had only a few years before passed its perihelion, and astonished the "gazing nations by his fiery train of length enormous." Whiston seized upon that celestial visitor as a fit instrument in the hands of the Deity for producing the flood which is supposed to have drowned the whole earth. He supposed that great comet to have approached so near our world, at a former return to our system, that the atmospheres of the comet and the earth intermingled, and the result was a sudden condensation of the aqueous vapors of which he supposed the comet to be principally composed, and Noah's flood was the result. Since the rain continued forty days and the waters covered the highest mountains, which we know to be more than five miles, during Whiston's shower thus produced the rain fell at the rate of thirty feet to the hour! We need hardly add that Whiston's hypothesis has no foundation in nature.*

In 1749, Buffon made known his theoretical views in relation to the former changes of the earth, by the publication of his "Natural History." He assumed an original volcanic nucleous and a universal ocean, like Leibnitz. He supposed the highest mountains once covered by this aqueous envelop. Horizontal strata were then formed by the action of powerful marine currents, which washed away the solid matter in some parts and deposited it in others; and in some places deep submarine valleys were the result of this action. The ocean settling into these hollows, its level was depressed, and thus

* See Whiston's *New Theory of the Earth;* wherein the Creation of the World in Six Days, the Universal Deluge, and the General Conflagration, as laid down in the Holy Scriptures, are shown to be perfectly agreeable to Reason and Philosophy.

elevated parts of the bottom of the ocean were left dry,
; islands and continents. He imagined the strata to be
lly horizontal, and he supposed that those which con-
organic remains had never been disturbed since their
ion—parts of his theory which a little observation
have corrected. Buffon was not an original observer
ogy, and he added but little to what had been before
the way of observing facts and reasoning upon them;
genius, the eloquence of his style, and the boldness of
culations did much to awaken curiosity, and to stimulate
of enquiry among his countrymen.*

1756, Lehman, a German mineralogist, published a
which he divided mountains into three classes; those
with the world, and before the creation of organized
; those which resulted from a partial destruction of the
y rocks by a general revolution; and, lastly, those pro-
by local revolutions, and in part by the flood of Noah.†
ring the year 1760, the Rev. John Michell, Woodwardian
or of Mineralogy at Cambridge, published in the "Philo-
l Transactions" an "Essay on the Cause and Phenomena
hquakes." His attention was drawn to the subject by the
arthquake at Lisbon in 1755. This writer had a truly
phical mind, and he advanced many new and original

"Some of Michell's observations," says Lyell, "an-
e in so remarkable a manner the theories established
ears afterwards, that his writings would probably have
an era in the science if his researches had been uninter-
."‡ Michell's scientific writings were free from the-
but some of his contemporaries were still at work upon
nnection between the Noachian deluge and geologic
nena. The existence of the earth for a greater period
bout six thousand years could scarcely be admitted by
o-theological writers; and yet, if only existing causes

* In his *Natural History.*
† *Essai d'une Hist. Nat. des Couches de la Terre.*
‡ *Principles of Geology*, vol. i. p. 59.

were considered as having produced the appearances observed in the crust of the earth, ten or a hundred times that period might be required. Thus there was a struggle continued through several centuries between those who believed in the hypothesis which limited the former duration of the earth to a comparatively short period of time, and such as based their conclusions on actual phenomena observed in the natural world. We see in nature no limitation in regard to time. Results are produced by the least possible expenditure of force, because in this element there seems to be a limitation; but, in the element time, there are absolutely no boundaries. In investigating the former changes of the earth, then, we need only enquire whether or not such causes could produce them with any regard to the times required in nature for their production.*

Towards the close of the eighteenth century, the necessity for the progress of positive knowledge of distinguishing the mineral masses of the globe into several groups became generally apparent. The labors of Pallas and Saussure contributed most to this end. The former, after he had made a careful examination of the two great mountain chains of Siberia, announced the result that granite was in the middle, the schistose next, at the sides, and the limestone outside of those. He prepared a memoir on the fossil bones of Siberia, which attracted attention to some of the most remarkable phenomena in geology. He stated that he had found a rhinoceros entire in the frozen soil.† The four mammoths since found on the shores of the Arctic ocean, in the Russian empire, remove all doubts respecting the discovery. Saussure gave his attention to an examination of the structure of the Alps and the Jura, and the data he thus collected proved very valuable to those who followed him.‡

* Of course, if we wish to know how rapidly or how slowly nature works we may institute a series of observations to determine this element, which may then serve to correct hypothetical historical periods of time.

† See *Eloge de Pallas*, Cuvier. See also Figuier's "*World Before the Deluge*," *passim*.

‡ *Voyage dans les Alpes*, 1779.

In the year 1775 Worner was appointed professor of mining in the School of Mines at Freyburg, in Saxony; Pallas and Saussure gave but little theorizing or deducing logical results from the data which they collected; but Worner attempted to classify and co-ordinate facts, and to describe them in definite language, and he gave to the science the name *geognosy* in contradistinction to geology, which, up to that time, was little more than an assemblage of conjectures and hypotheses. Worner adopted the conclusion that the granite and the other crystalline rocks are marine deposits, like the stratified and fossiliferous rocks. At a remote period in the world's history the different materials from which the strata were derived were either dissolved or held in solution in the ocean. From this chaotic ocean, according to Worner, all the strata were, one after another, precipitated, some by chemical and others by mechanical means. When this solution covered the whole earth, and was of great depth, it was tranquil and pure. For this reason the first rocks were chemically precipitated and exclusively crystalline Afterwards, when the bed of the ocean was in some way lowered, and land began to appear, currents were produced, which wore away by atmospheric agencies, and thus mechanical deposits were formed and even became abundant. Worner wrote but little, and we get his views principally through the writings of his pupils and followers. He was strongly prejudiced in favor of his own theories. "The internal activity of the globe is completely disregarded as well in respect to the formation of crystalline rocks and metalliferous deposits, as to its being the cause of the dislocations undergone by the stratified deposits of all ages." All the strata, according to his system, were produced at their origin as they now exist.*

James Hutton, M.D., a contemporary of Worner, but a native of Scotland, came to opposite conclusions on certain

* His first work was entitled, *Theory of the Earth; or, an Investigation of the Laws Observable in the Composition, Dissolution, and Restoration of Land upon the Globe.* It was read the 7th of March and the 4th of April, 1785, before the Royal Society of Edinburgh.

fundamental phenomena, and thus two antagonistic schools were established. Hutton resided at Edinburgh, where he enjoyed the society of many men of high attainments, who loved him for the simplicity of his manners and the sincerity of his character. He had been educated as a physician, but he declined the practice of medicine, and resolved to give his undivided attention to scientific pursuits. He made frequent tours through England and Scotland, and collected many facts. After maturing his views he published, in 1785, his "Theory of the Earth."* Ten years later, after having made several journeys in Scotland to collect new facts, he developed his ideas in a larger work having the same general title.† In this work it was for the first time declared that geology is in no way concerned about "questions as to the origin of things." He endeavored, by laying aside all hypothetical causes, to explain all the former changes observable in the earth's crust wholly by the action of natural agents. Hutton's desire was to give fixed principles to geology, as Newton had done to astronomy, but the time had not yet arrived—the necessary data had not yet been collected.

"The ruins of an older world are visible in the present structure of our planet," said Hutton; "and the strata which now compose our continents have been once beneath the sea, and were formed out of the waste of pre-existing continents." He argued that the same forces are still destroying, by chemical and mechanical action, even the hardest rocks, and transporting the *débris* to the sea, where it spreads out and forms strata analogous to those of a more ancient date. "Although loosely deposited along the bottom of the ocean, they become afterwards altered and consolidated by volcanic heat, and then heaved up, fractured and contorted."

Hutton had never explored any region of active volcanoes, yet his observations on the phenomena presented by basalt, and other trap-rocks, convinced him that they are of igneous

* *Annales des Mines*, 5th series, vol. 16, pp. 155-171.

† *Phil. Transactions*, Edinburgh, 1788.

origin, and that many of them had been injected, when in a melted state, through fissures in the older strata. The different aspect which these rocks presented from ordinary lava, he attributed to their having cooled down under the pressure of the ocean. To remove the objections brought against this part of the theory, Hutton's friend and disciple, Sir James Hall, instituted a series of highly important and useful experiments on the influence of pressure on matter while cooling down from a molten state. These experiments served to confirm Hutton's conclusions. The absence of stratification in granite, and its similarity in mineral character to such rocks as he considered of igneous origin, led him also to conclude that granite must have been formed from matter in a state of fusion—a conclusion which observation has since fully established as correct.

Hutton saw "in the economy of the world no traces of a beginning, no prospects of an end." This fact, together with his hypothesis that all former changes on our globe were produced by existing causes, seemed rather startling to the theologian, who regarded the earth as being but a few thousand years old, and all its prior changes as having been brought about by violent causes in a small space of time. He was not altogether correct in some of his explanations of the causes of geological phenomena. Indeed, he had made no step beyond Hooke, Moro, and Raspe, in showing in what manner the laws at present governing subterranean movements might bring about geological changes, if sufficient time be allowed. He imagined that the continents were first gradually destroyed by aqueous degradation; and when their ruins had thus furnished the materials for new continents, they were again up-heaved by violent convulsions. Thus his theory required alternate periods of disturbance and repose.* Such appeared to him to be the order of nature.

The Huttonian system became, perhaps, more widely

* *Phil. Trans.*, vol. vi, Edinburgh, 1812. Account of a series of experiments showing the effects of compression in modifying the action of heat The paper was read June 3,1805.

known through the writings of his disciple, John Playfair, who was at the same time a profound mathematician, an eminent geologist, and a distinguished writer. His talent for exposition, and his elegance of style, vigorously sustained the new doctrine, not only against the violent attacks of the few that accorded to it a serious consideration, but also against the disdainful indifference of the majority by whom it was regarded as unfounded * The labors of Hutton and his disciples did not become known to any extent on the continent of Europe till after the year 1815, when the relations of Great Britain with the rest of Europe were again established. At this time a French translation of Playfair's works appeared in Paris, thirteen years after their publication in Edinburgh. A few years afterward (1822) Dr. Boué, who had studied geology in the Scottish capital, contributed to propogate these new ideas. Sir Charles Lyell has done much, by elegantly-written works,† to make known the Huttonian doctrine. In 1825 he summed up, under the name *metamorphism*,—a term since generally employed—the changes which, according to this doctrine, the rocks of sedimentary origin have undergone by the action of central heat.

Since geology does not altogether harmonize with certain theological, cosmogonical, and cosmological ideas entertained by many, because it carries the origin of the earth back almost indefinitely, and sees no termination to its existence, we may be permitted to quote from Playfair's works a passage relating to this point:

"In the planetary motions, where geometry has carried the eye so far, both into the future and the past, we discover no mark either of the commencement or termination of the present order. It is unreasonable, indeed, to suppose that such works should anywhere exist. The Author of Nature has not given laws to the universe which, like the institutions of men, carry in themselves the elements of their own destruction. He has not permitted in his works any symptom of infancy or old age, or any sign by which we may estimate either their

* See Playfair's *Illustrations of the Huttonian Theory of the Earth.*

† See his *Elements of Geology* and *Principles of Geology.*

future or their past duration. He may put an end, as he no doubt gave a beginning, to the present system, at some determinate period of time; but we may rest assured that this great catastrophe will not be brought about by the laws now existing, and that it is not indicated by any thing which we perceive."*

At one time the controversy between the Volcanists and Neptunists was carried to that extent which made these names terms of reproach; and the two parties, instead of devoting their time to the collection of facts, gave their attention more especially to searching for arguments to strengthen their own cause, or to disprove that of their opponents. Fortunately, for the progress of geology, a new school at length arose, that professed to be strictly neutral with respect to the two antagonistic systems of Worner and Hutton. Their sole object was to devote their attention to observation and the collection of facts. Thus they thought to lay the foundation for a system that would accord more nearly with the actual system of nature. "The reaction, provoked by the intemperance of the conflicting parties," says Lyell, "now produced extreme caution. Speculative views were discountenanced, and, through fear of exposing themselves to the suspicion of a bias towards the dogmas of a party, some geologists became anxious to entertain no opinion whatever on the causes of phenomena, and were inclined to scepticism, even where the conclusions deducible from observed facts scarcely admitted of reasonable doubt." Though this reluctance to theorize was perhaps carried to excess, yet this measure proved very salutary at that time. A large amount of new data was required, and the Geological Society of London, which was founded in 1807, contributed much to the attainment of so desirable an end. To multiply, extend, and record observations, and patiently wait for the result at some future time, was what the society proposed to do. It was claimed that the time had not yet arrived to frame a correct "Theory of the Earth." By acting up to these principles, the members had the satisfaction, in a few years, of knowing that they had

* Vol. iv, p. 55.

rescued the science from the imputation of being theologically dangerous, or, at the best, but a visionary pursuit.

Geology, like every other science, has found theological prejudices, growing out of ignorance, to be its greatest obstacle to advancement. Man is singularly tenacious of those ideas which were impressed upon his mind while young, especially those pertaining to religion or theology, and since the former is generally regarded as intimately connected with the cosmogony of the earth, if not founded upon it, the theologian seems always to be in fear that some new science will prove his religious system false, or in some way injure the moral and religious prospects of the human race.* A little consideration ought to teach the man of reason that no new science, nor discovery of any kind, can prove truth to be otherwise than truth. It must stand the severest test.

The main principles of the science of geology are now well established. The order of the superposition of strata is well settled, and the adaptation of races of beings to the conditions which surrounded them during the progress of the formation of the earth is a fact no longer disputed; and this great principle is now one of the most important in geology, since it enables the geologist to determine the relative positions and the character of the strata, as well as the physical conditions which prevailed at the time they were deposited, from the character of the fossil remains which they contain.

The intimate connection of the physical sciences becomes more and more apparent as new discoveries in them are made. Many things discoverable in the solar system and the sidereal heavens, and especially a condition of matter—the gaseous—revealed by the spectroscope, and existing apparently in all parts of the inter-stellar spaces, lead almost directly to the

* We believe that the sentiment of religion is inherent in the human mind, and is in no way connected with the disputed question as to whether the earth was made in six days or in as many myriads of years. Theologians, by attaching to their religious systems disputed points in science, have always brought upon themselves more or less trouble, as new discoveries have shown that certain things admitted as truth at one time have really no foundation in nature. The truth of the Christian religion is not dependent on the correctness of the Mosaic cosmogony.

conclusion that this earth was not only once a molten mass, but, prior to that, even in a state of vapor. Geological facts point as directly to a time—perhaps millions of years in the past—when all the solid parts of this terrestrial globe were in a melted state. These data have served as the foundation of a theory of the earth which, with a few exceptions, is admitted by geologists as being a near approximation to the truth. This theory is connected directly with the nebular hypothesis in astronomy.* According to this theory the earth was once a gaseous spheroid, which, by refrigeration, was reduced in dimensions, and, in the course of time—necessarily requiring an immense number of ages—it so far cooled down as to have a crust, differing, probably, in thickness and tenacity in different parts, according to the nature of the materials of which the different parts were composed. In this manner a *succession* of thin solid crusts were formed, each, in its turn, shrinking and cracking, until at length a certain balance would be reached between the thickness of the crust and the rate of cooling and the amount of internal heat, when a rough, uneven surface would be left, having many elevations and depressions. By this time its temperature would be sufficiently reduced to allow of the existence of an ocean of water, and of an atmosphere of permanent gases and of aqueous vapor, the former necessarily settling into the hollows, forming seas of greater or less depths, and the latter surrounding the youthful earth, as the existing atmosphere now does. Both the liquid ocean and the gaseous atmosphere would necessarily, from the close proximity to the molten interior, be much elevated in temperature, and being constantly in motion, through the action of the attractive influence of the sun and moon, producing tides, and the rotary motion of the earth, combined with a difference of temperature, producing currents, these envelopes would have a powerful disintegrating effect on the solid parts of the globe with which they came in contact. It is somewhat probable that great storms, in the form of

* See the *National Quarterly Review*, No. xxxii, Article vi.

hurricanes, would frequently arise, producing great relative changes in the land and water.*

Up to this period the establishment of a sea, and perhaps long afterwards, no organic beings could probably exist; since we are not aware that either animal or vegetable can exist and perform its functions in water or on land at the temperature of boiling water† (212° Fah.) According to this theory then, the first period of the earth's existence was marked by chaotic condition of things consequent upon igneous fusion and characterized by frequent disturbances of the surface as a result of the cooling from such a state.

Since the earth now had a crust of only comparatively few miles in thickness, the lowest, or rather the foundation rocks, should be of a crystalline character, without any evidence of stratification. This is actually found to be the case for granite is admitted upon all hands to be the lowest first-formed rocks in the whole series composing the earth's crust.‡ These crystalline rocks now forming the shell or surface which separates the ocean and atmosphere from the melted interior, the various operations of atmospheric, aqueous and igneous agencies would be set in motion to modify the newly-formed crust, and to produce all that long series of changes which it is the province of geology to consider.

The rains which fell upon the granitic crust, the streams which descended from the mountains, and the rivers which wore their way through its gorges and valleys, would all wear down and carry away the abraded materials to a lower level

* "Ocean, unequal press'd, with broken tide
And blind commotion heaves; while from the shore,
Eat into caverns by the restless wave,
o o o o comes a voice,
That solemn sounding bids the world prepare;
Then issues forth the storm with sudden burst,
And hurls the whole precipitated air
Down in a torrent. On the passive main
Descends the ethereal force, and with strong gust
Turns from its bottom the discolor'd deep."—THOMPSON.

† At a temperature not much short of this, however, it is known that certain small animalcules, and some of higher organization, seem to be capable of enjoying life.

‡ Page's *Geology*, p. 97.

where they would be deposited in stratified beds, differing but little however, in mineral composition from the rocks whence they were derived. On account of the unstable condition of the surface, while the levelling agencies to which we have referred were forming stratified rocks, the igneous forces would be elevating some parts of the surface, and in some instances the interior melted matter would burst through volcanically, and overflow the stratified deposits. On this account it is sometimes difficult to distinguish the earliest stratified rocks.

Up to this condition of things there is little or no evidence of the existence of animal or vegetable life. All was bare and desolate; "not a moss nor a lichen covered the naked skeleton of the globe; not a seaweed floated in the broad ocean; not a trace existed even of the least highly organized animal or vegetable; everything was still, and with the stillness of absolute death. The earth was indeed prepared, and the fiat of creation had gone forth; but there was as yet no inhabitant, and no being endowed with life had been introduced to perform its part in the great mystery of Creation."

The era of the clay-slate and grauwacke system followed. During the period embraced by these rocks, important events in the history of our planet took place. Mineralogically speaking, these rocks differ materially from those of previous systems. The crystalline texture among them is very faint. Stratification is now very obvious, with frequent alterations of sandstones, conglomerates, shales, and limestones. All this proves the great diversity of action, such as rivers, currents, tides, and waves; the deposition in calm water, and accumulations by violent inundations. Here the geologist for the first time in the physical history of the earth finds the remains of organic existence. These remains are those of lowly-organized seaweeds, zoophytes, and mollusca. The character of these teaches the geologist the relative depth of the sea and the nature of the bottom, as well as the kind of material held in solution in the water.

The next series of strata in order were the silurian of Mr Murchison, and the old red sandstone. These strata are still more decidedly sedimentary than any of the former. They are composed of sandstones, conglomerates, shales, clays, and limestones, alternating with one another in such a manner as to show that numerous agents were active in their formation. Mr. Murchison has illustrated the silurian system, and Mr Hugh Miller has written a very interesting and instructive volume on the old red sandstone formations.

After these formations, there followed in immediate succession one of the most interesting and peculiar eras in the geological history of our globe; we mean the carboniferous system. At the close of the old red sandstone period, the physical character of the earth seems to have undergone almost a total change. The red sandstone and gravelly conglomerate which had been formed along the shores of the bottom of the sea were upheaved into dry land. The limestones, fossil shell-beds, sandstones, shales, clays, coals—one great peculiarity of this period—and ironstones of the carboniferous system, indicate a vast variety in the causes concerned in their production. Lakes, estuaries, and shallow seas were the places of deposit; gigantic rivers, periodical inundations, tidal currents, and waves were the transporting agents; extensions, deltas, and wide river plains nourished vegetation; a vast extent of recently upheaved continents was the source of the rock *débris;* and to people the scene new races of organized existence—plants and animals—were called into being. The most characteristic organic development of this period, however, consists in the enormous growth of terrestrial vegetation, from which the numerous beds of coal, from which the system takes its name, were derived. This vegetation seems to be of a tropical character principally—palms, pines, tree-ferns, reeds. They were generally of gigantic size, and they indicate a rapid growth. Every swamp, plain, and hill-side seems to have been choked with their luxuriance, evincing a

orable conditions for the growth of vegetation than the th has experienced at any time since.*

During the carboniferous period the subterraneous fires e less active than at former periods, but it was only an of ordinary tranquillity. They were only smouldering to ew their activity after a time, which marked the beginning new formation, known as the new red sandstone system. ore the commencement, and after the close of the coal- ning period, subterraneous forces were very active, up- ving the hills upon which the mountain limestone of the red sandstone period reclines, the conical and isolated ations of the coal measures, and producing all their frac- s and dykes. The strata of this system are composed of aceous, argillaceous, coleareous, mogenesian, and saline erial.

After the new red sandstone formations, there followed a od of comparative tranquillity, known as the oolitic sys-

The surface of the globe during this period consisted of ds and low continents, surrounded by comparatively ow seas. The land supported a tropical, but not luxuriant tation, and the waters swarmed with shell-fish, fishes, and iles. The cretaceous system followed. This occupies limited spaces, and, being of marine origin, it points to detached and inland seas as the areas of their de- ; than to the shores and bays of the ocean.

The tertiary strata succeeded. These were deposited r conditions still more closely allied to those of the present

With a few exceptions, the gravels, sands, marls, and s are scarcely distinguishable from those of recent times. se tertiary accumulations were regarded, before the labors ie celebrated Cuvier and M. Brogniart in the Paris basin, nere superficial accumulations. They seem to have been ned in estuaries and shallow seas, under such circumstances t fresh water was the predominating agent.

* Page's *Geology*, pp. 143–4; Higgins' *Physical Condition of the Earth*, p. ; Ansted's *Ancient World*, chap. v.

The present era is that represented lithologically by the superficial accumulations of sand, gravel, clay, marl, peat moss, shell-beds, and coral-reefs, with which all are more or less familiar.

We have thus very briefly sketched the physical history of the earth. It presents a long series of mineral and vital gradations, comprehending an immense period of time, and, yet, only imperfectly interpreted by the science of geology. Of the future history of the physical character of the globe, it is vain to conjecture. We know too little about the laws regulating terrestrial phenomena to be able to predict what will take place in the geology and physical geography of our planet. Geology is not yet, like astronomy, a science of calculation.

Of the physical geography of those parts of the earth where the different formations which we have enumerated reach the surface, we may remark that a granite district is not distinguished for its fine scenery. If the rock be soft the hills have a rounded appearance, and are only peaked and irregular in outline when it is hard and flanked by stratified rocks. Granite rocks in general form lofty mountains and elevated table lands, and such districts present a bleak and barren aspect, which is rendered still more so when the more elevated peaks are snow-clad.

The physical appearance of primitive* districts is bold, rugged, and unfertile. The granite rising up, throws the primary strata—gneiss and mica schist systems—into lofty mountains, and into abrupt vertical positions, and it is here chiefly in this formation we find those deep glens and abrupt precipices which give the well-known picturesque effect to highland scenery.

Transition or palæozoic districts are marked by geographical features at once bold and mountainous. "Supported by granite," says Professor Phillips, "and mixed with igneous

* The stratified rocks are usually divided into primary, transition, secondary, tertiary, and superficial accumulations in the older geological works; and in some others into primary, palæozoic, secondary, tertiary, drift, and alluvium. The latter division is used by the best English and American writers, and it has more or less foundation in nature.

masses, the slaty rocks of the English lakes rise to more than three thousand feet in height, and present a variety of outline and intricacy of combination which, in connection with clear lakes and considerable waterfalls, leave to Switzerland little superiority."

The old red sandstone districts are usually varied and irregular; the hills being less bold and precipitous than those of the primary formation, but more so than those of the subsequent periods. Where the shale lies flat and unbroken, the scenery is uninteresting, but the soil is usually fertile. On the contrary, the mountain scenery of the old red sandstone formation is much varied—"rising in easy undulations, sinking and swelling in every direction, yet preserving a common continuity of range, they present in the chain a succession of rounded heights and cones; but, in the mass, an irregular surface of hills and valleys, glens and recesses, of great beauty and amenity."

Carboniferous districts are rather tame and uninteresting in their physical appearance. The hills connected with the mountain limestone present considerable variety, however, owing to the bold escarpments of that rock. New red sandstone districts are flat and gentle. There are no picturesque crags, mountain ranges, or deep ravines to diversify the scenery. The oolitic system is not sufficiently developed in many parts of the earth to give any distinctive geographical features. The physical aspect of the chalk formation is distinguished by the smooth, flowing outlines of the hills and valleys. There are no rugged and lofty peaks, as in the earlier formations.

The scenery of tertiary districts is rather unvaried, as in the plains of this formation in northern and middle Europe. In England, the strata partake of the undulations of the underlying chalk. From the open and porus nature of the sands and gravels, tertiary soils are usually light and dry, capable of profitable cultivation, though not naturally fertile.

A number of rocks, having a resemblance to one another in

mineralogical characters, have been classed together under the general name trap, signifying a stair, from the stair-like appearance which they present. Mr. Parker found one part of Lewis river, beyond the Rocky mountains, walled up with trap rock to the height of three hundred feet, nearly perpendicular.

The Giant's Causeway, on the northern coast of Antrim, in Ireland; and Fingal's Cave, in the Island of Staffa, one of the Hebrides, are celebrated examples of the columnar structure of this class of rocks. The former commences in one direction at the basis of a cliff rising six hundred feet above the level of the Atlantic. "The causeway consists of an immense number of columns, which project into the sea to a considerable distance below low-water mark. Its length at low water has been computed at about six hundred feet, and its greatest width at about two hundred and forty feet; the height of the columns vary. The majority are not more than twenty feet high, while others have been found to measure six and thirty. The entrance to Fingal's Cave is fifty feet broad and a hundred feet high. Its entire length is two hundred and fifty feet. On each side there is a series of beautifully-formed and regular columns, and the broken pillars of the roof resemble the enrichments of gothic architecture. "But if this cave," says Dr. Macculloch, "were even destitute of that order, symmetry, and richness, arising from the multiplicity of parts combined with greatness of dimensions and simplicity of style which it possesses, still the prolonged length; the twilight gloom, half concealing the playful and varying effects of reflected lights; the echo of the measured surge as it rises the transparent green of the water; and the profound and fairy solitude of the whole scene could not fail strongly to impress a mind gifted with any sense of beauty in art or nature."

Respecting the age of the world, our knowledge is very imperfect. Our data here are too few and too imperfect to e

* *Exploring Tour beyond the Rocky Mountains*, p. 127.

† Higgins' *Physical Condition of the Earth*, p. 244.

able us to arrive at any very satisfactory conclusions. Lyell estimated that Niagara river had occupied thirty-five thousand years in receding from Queenstown to its present site.*

Since the earth is nearer the sun by nearly three millions of miles in winter than in summer; and since this difference is constantly varying, necessarily producing a change in regard to the difference of summer and winter temperature; and since, according to the calculations of M. Leverrier,† the earth approached the sun, two hundred thousand years ago, ten millions of miles nearer in winter than in summer, the question arises, was any of these great alterations of terrestrial temperature between summer and winter (112° Fah.), dependent on the earth's eccentricity, the cause, or among the concurrent causes, of those producing the glacial period? Sir Charles Lyell, in attempting to answer this question, arrives at the conclusion that the great glacial period began about a million of years ago. And, extending the argument further, he concludes that, speaking after the roughest approximation, "*two hundred and forty millions of years may be the entire series of years which has elapsed since the beginning of the cambrian period.*"‡

The connection between astronomical and geological phenomena is rendered still further apparent by the researches of the late Professor Alexis Perry, of Dijon, France.‖ He finds, by an extensive comparison of the times of earthquake shocks with the positions of the moon, both with respect to the sun and in her orbit, "that there is a relation between the frequency of earthquakes and the rotation of the moon." He finds also, "That, relatively to the lunar motion, earthquakes are more frequent at the perigee than at the apogee; and relatively, to the earth's orbital motion, they are more frequent

* *Travels in North America*, vol. i, p. 27.

† *Annales de l'Observatoire*, vol. ii; edition iii, p. 29.

‡ *Prin. Geology*, 10th ed., vol. i, p 296. See also *Monthly Notices of the R. A. Society*, vol. xxviii, p. 120.

‖ *Propositions sur les Tremblements de terre et les Volcans*; formulées par M. Alexis Perry, Professor à la Faculté des Sciences de Dijon. 36 pp. 8vo., Paris, 1863.

at the winter solstice than at the summer; that is, the perihelion, than at the aphelion." It has also been suggested that the gradual rise of continents or of coasts may be owing to some secular action of the moon. Professor Simon Newcomb, in discussing the apparent inequalities of long periods in the mean motion of the moon, infers that, very probably, the interior fluid* of the earth is in some way subject to a secular movement, possibly sometimes towards the equator, and then from it, and this influences the rotation of the crust of the earth, and this variation can, at present, only be detected in the motion of the moon.† Would not this secular fluid movement produce a similar secular change in the relative heights of continents?

Geology is not a speculative and useless science. To the miner it is of the first importance—being essential at every step. To the engineer it is no less useful. In fixing a line of road or railway, the informed engineer will avail himself not only of facilities for present construction, but calculate for the future benefit of those concerned in the undertaking. The agriculturist may derive much assistance from the science of geology. He should know the composition of the prevalent rocks, and the positions which they occupy, that he may select the proper kind for his purpose.

This science, like most other sciences, has still a wide field before it for research, many difficulties to overcome and prejudices to remove. But it is intimately connected with the useful and the practical, and we may hope to attain yet to a very perfect knowledge of the physical history of our planet.

ART. VI.—1. *The Treaty of Paris, the Treaty of Prague, etc.*

2. *Diplomatic Correspondence and Declarations of War.*

UNDER the old system of the German Federation, Germany was the bulwark of peace to all Europe. She numer-

* It is estimated that the crust of the earth is only about a hundred miles thick. Observation shows that there is an increase of 1° Fah. for every fifty feet of descent towards the centre of the earth. At this rate the temperature of melted rocks would be reached much short of one hundred miles.

† Silliman's *Journal*, vol. iv, p. 194.

bered seventy million people, had two millions of fighters ready to defend her interests, and Austria, Prussia, Bavaria, and Saxony were so little disposed to unite for purposes of aggression, that but one instance is recorded of their so doing—that of Schleswig-Holstein. Abominable as that exploit was stigmatized throughout Christendom, it was, nevertheless, the exception; flagrant, indeed, but proving the rule; generally the German Federation bade the world defiance, yet warred upon no one. It was the hereditary rivalry between Austria and Prussia which caused disruption and open quarrel between these two. Prussia conquered, and with Count Bismark as her prime minister, she commenced that dynastic career the issue of which is still doubtful, notwithstanding the reverses of the French.

A glance at the map shows France to be coterminous with Germany for a distance of about two hundred and sixty miles; the frontier forming an angle, of which the southern side commences at Basel, in Switzerland, and runs to Lauterburg, as the apex of the angle; and the northern and shorter side terminates in the small village of Sirk, on the Moselle. Baden, Bavaria, and Rhenish Prussia adjoin the French line.

Seated almost impregnable in the north, amid the devotion and national aspirations of forty millions of German population, so suddenly, and in some cases so rudely, augmented from scarcely more than half that number, Prussia was attaining to dominion in the East through one Hohenzollern on the throne of Roumania, and if, in the West, through the crowning of another, she would by her alliance with Italy be enabled to encircle France with a *cordon* of subsidiary states, and the new power which Bismark had created, would assume a preponderance in Europe unmatched since the time of the first French empire. Russia, indifferent, had her own designs in the East to prosecute; besides her, no state upon the Continent was strong enough to manifest envy or dislike at the swift absorption of so much of Germany by its Prussian element except France, and to this power the Spanish sceptre-

in the hand of a Prussian prince, closely related to the reigning house of Portugal, were suggestive of a Prussian coalition in the French rear, and indicative of Prussian plan and startling purpose.

Bounded on three sides by Prussian influences—from Jahde to Basle, and from Nice to Geneva—as in such a case France would be, when we take into account the traditional jealousy of the two nations, and the working of recent events in Prussian policy, we shall marvel less, it may be, at French antagonism to the Hohenzollern scheme, even had the imperial cabinet been unsustained in its objection by established European precedent.

A retrospective glance at the reign of King William will show that there was little so decidedly preposterous, as has been diligently set forth, in the suspicions of French statesmen as to the undeclared tactics of Bismark. Crowned in 1861, in 1862 commenced the troubles between the monarch by right divine and his then discontented people; troubles which, in one way or another, have continued to the present day—witness the imprisonment of Jacoby and friends within the last few months. In 1863, the terms of the constitution were set at naught to reorganize the army at the king's pleasure, and dissentient deputies were sent to their homes to learn better than to dispute the sovereign will. In 1864 he made war, though his chamber had refused to vote the budget for that purpose which the government had demanded; and in 1865 deputies again were prosecuted, who in their speeches condemned the course of royalty. In 1866, a recalcitrant house was deliberately prorogued by Bismark, and the king declared war and peace, and afterward dragooned his parliament to acquiesce.

These are but characteristic items, notorious in the domestic history of King William's sway; and the foreign policy of the king and his minister is not yet a forgotten story from 1864, when the Schleswig-Holstein question, as now known in the records of European diplomacy, was

unexpectedly raised. This was a pretended protection of the German independence of the duchies, from alleged infringement on the part of Denmark, under whose rule they were; and it ended with the brutal wresting of her possessions from the maternal state. Germany was put in the van, and Austria dragged in the rear, to crush puny Denmark and rob her of her provinces.

In 1865, Lauenburg was bought from Austria without consulting its inhabitants, who, at the point of the bayonet, were ordered to transfer their allegiance to the Prussian king. In the same year, ignoring that the plea for war upon Denmark had been the interests of Fatherland, Bismark signed the treaty of Gastein, by which he gave Holstein to Austria, keeping Schleswig for himself, and cast the protest of the Holstein states into his waste-paper basket; but, in 1866, despite the treaty signed the year before, he laid covetous hands on Holstein, Austria's allotted share in the unholy conquest. The diet of Frankfort, which remonstrated, he sent about their business; and even when Austria joined her angry reclamations, he continued a deaf ear, as he busily consummated his armaments at home; and having denounced the kaiser to Europe, as planning a disturbance of the public peace, he one day opened the campaign of '66, and two weeks later triumphed at Sadowa.

Prussia, in short, during the government of the present king, has absorbed Hanover, Hesse-Cassel, Nassau, the free city of Frankfort, and a number of minor principalities. She has mediatized Saxony, now practically a Prussian province, and has made mere subject satellites of Bavaria, Wurtemburg, and Baden. She has expelled Austria from the German bund, though Francis Joseph had committed no other fault than that of remaining faithful to the original confederation. She has despoiled Denmark, and after assenting to a niggardly restitution to that kingdom, deliberately refused to act. She has intimated that Germany could not be content without Holland, and cajoled

the imperial cabinet with the idea of compensation on the Rhine for the emperor's neutrality, whilst she took whatever pleased her from her neighbors.

When all was done and over she objected to the sale and cession to the French of Luxembourg by the Dutch, a bargain which, with English counsel, the French renounced. Kings and princes by the score she has deprived, as in Hanover, of their states and fortunes; and, finally, Bismark has ostentatiously denied to France the right of watching over the treaty of Prague, by the fifth article of which, at French instigation, Prussia agreed to restore a portion of Schleswig to Denmark, the rightful owner of the whole; the treaty, as all are aware, has remained a dead letter. And such, in brief, is the unvarnished but eventful chapter of Prussia's acts and growth in the nine first years of the current *régime*.

General Prim, with the approbation of his colleagues in the government of Spain, more than a year ago, had privately sounded the disposition of Prince Leopold,* who at first declined the crown of Isabella. Subsequently, through the intermediary of his sister, the countess of Flanders, it was said, he responded favorably to the overtures of the Spanish general, and the programme for his installation was speedily gotten ready at Madrid. General Prim addressed a letter to the president of the Cortes, asking him to convene an early session; the prince was to be elected the first days of August by two hundred votes, which are more than the needful two-thirds of the Spanish assembly: he was to be conveyed from a German port in a Spanish war-steamer, and his civil list was fixed at on-

* For the sake of completeness, we will state that Prince Leopold of Hohenzollern-Simarengen is son of the actual prince of that name, who abdicated his sovereign rights in favor of the King of Prussia some twenty years ago, and received the title of Royal Highness and a recognised rank at court as a member of the Prussian royal family, with which his lineage connects him. The son married, in 1864, a sister of the King of Portugal, and is elder brother to Prince Charles of Roumania, who conquered that country in 1865, carpet-bag in hand, and who now reigns there in discontented fealty to the Turkish sultan. Prince Leopold is a catholic, 35 years of age, a colonel in the Prussian army, a grandson of Murat on the female side, and so a distant relative of Napoleon III.

million dollars. These and other settlements were published in London and Paris within a day or two of the divulgation of the Hohenzollern candidature, that is to say, in the second week of July; and the abrupt intelligence was commented on with surprise at its completeness, and an universal sense of its distastefulness, with or without design, to the government of the emperor.

Sadowa, North Schleswig, Luxembourg, and the Baden fortresses represented great events during the past four years, which had not been constantly turned by Prussia to conciliate the pride or friendliness of the French; yet they were deemed slight provocations by the side of that which would place a probable servant of Count Bismark upon the throne of Spain, whence a Bonaparte had been chased with ignominy. And even at this early hour, more than one German journal* discountenanced Bismark's plan as such, surmising, as did certain of the British press, that the Spanish Warwick must have obtained the consent of Prussia before offering the crown to a cadet of the house of Hohenzollern, since in the presence of inevitable opposition from France, and without that sanction, General Prim would have been sedulously preparing a gratuitous mortification for his countrymen.

In the midst of speculation at the momentous news, whilst awaiting some manifestation from the cabinet of Berlin to dissipate or settle the reigning doubt as to Bismark's sponsorship of the *protégé* of General Prim, the theory that that minister might have long been ready and willing to fight France, but had bided the proper opportunity according to his judgment, was naturally enough advanced. Had Bismark, though able, it was argued, essayed to precipitate the juncture with his new confederation of the South German states in the face of French remonstrances, Prussia would have appeared as a notorious breaker of treaties and a wanton disturber of the continental

* The *Frankfort Gazette*, the *Mannheimer Obenziting*, with the *Volksbote* of Munich, this last the most influential of Bavarian newspapers, all pronounced the step to be one in the interest of the Hohenzollern dynasty, to which the future of Germany was subordinated.

peace. France, as the ally of Bavaria, Wurtemberg, and Baden, would have come forward to resist her amid the applause of all Europe. The sympathies of Austria would evidently have been secured to France, whatever real service the former might have been able to render. France, in reality, then, by treaty and by act, was a material as well as moral check to any violent programme of spoliation and annexation, like that in Schleswig-Holstein, Hanover, or the duchy of Hesse,* on the part of the Prussian premier towards South Germany. France, perhaps might prove a block in Bismark's path, whilst she had seriously bound herself in no wise to hinder any expressed popular will or action of the southern states.

If now this Spanish crisis had been fostered to give umbrage to the emperor, it was submitted that Prussia could enter the struggle with several points in her favor, and accused of quite an intangible provocation, if of any at all, to justify Napoleon III. in declaring war. Bismark's ministry, in announcing their astonishment at French temper, might plausibly urge that they had nothing to do with General Prim and Prince Leopold: that the one represented Spain, a country to which the Germans were indifferent, and that the other was of age and a free agent, with whose ambition the king of Prussia must not be confounded, and the government could then reluctantly and solemnly take up arms to repel an advancing foe, not to Prussia alone, but to all Germany.

The Prussian sovereign, as is well known, at last denied all connection with the Spanish matter, and announced that he could not prevent Leopold from accepting a crown if he so elected, and alone at Ems the bothered monarch equivocated somewhat and finally got virtuously angry; while the father of the prince withdrew the son's candidature without any trace of Bismark's finger in the pie. The official journals of Berlin, in the meantime, as if at a given key, unremittingly proclaimed, but with remarkable composure, that war with France could

* No consultation of popular will was made in the annexation of Hanover, the electorate of Hesse, the duchy of Nassau, or the free city of Frankfort.

ly spring from the notorious jealousy and foregone resolve of
at dictatorial country,* and if Prussia was not more and more
onerated by the reading public, France unquestionably was
ore severely censured than before.

One fact, however, through all this diplomatic righteous-
ss, became more significant to the stolid few as time
ssed on, and that was that Prussia, having bound the
uth German states, by special treaties, to co-operation
ould the fatherland be invaded, would, by a crushing
feat of encroaching France, impel them irresistibly to-
rds the projected unity. Instead of wearily gaining
ssession of the south by force or trick, Prussia, in the
ent of victory, would have only to accept the spontaneous
mage thrown at her feet, and would thus make good her
im to the leadership of the German race. What the
ppling of Austria had begun for Prussian aggrandize-
ent, it was eventually hinted, the paralyzing of France would
complish, and the latter, all armed and defiant as she stood
the way, might, after all, prove vulnerable. At any rate,
en a migratory effort to overthrow Bismark's only obstacle
European supremacy for his country would afford an occa-
n to display a prowess of Prussia in the eyes of the con-
leration, sufficient to awe and to reconcile definitively certain
tless provinces in northern Germany and to render the
in but a provincial line. Although any part or all of this
ght legitimately come about, it was obviously necessary that
ssia's purpose should don the guise of a German grievance
king its just redress, and that France should be looked upon
he common enemy.

If we assume, then, that Bismark had arranged the election
Prince Leopold in Spain with a covert but ultimate view to
war with France, what line of conduct could he have
pted than the one he did, when the French government im-

* Up to and during her war with Austria in 1866, Prussia apparently had
idence enough in France, as not a Prussian helmet remained upon the
ne when that war began. Yet Bismark had offered no bribe to keep
st "rapacious France."

petuously pointed out the sinister tendency of that election
He disclaimed all complicity, challenged any palpable, convic
ing proof, and at the same time renounced either the right c
the inclination to divert the Spanish crown from the prince i
question; and this wondrous inactivity enhanced his reput
tion as a master in his craft, led certain politicians by the no
awhile, and cast all the blame for precipitating war upon th
French, without diminishing the certainty that war would h
inaugurated. Putting forward his self-anointed king, th
minister stopped in the background to give full view and pl
to French absurdity and distrust, and the arrogance and agre
sion of the empire.

At Paris it was at once made clear that France on n
account would abide the intrusion of a Prussian prince in
the Iberian peninsula. It should here be remarked th
the circumstances of Napoleon III. at that time no long
seemed to push him in the direction of war. As M. Olliv
said from his place in the chamber, the emperor had won h
Sadowa on the 8th of May previous, when he received th
support of upward of seven millions out of a little more th
nine millions of French voters. Much progress had be
made during the two last years, and the French were becor
ing reconciled to the rapid creation of the North German sta
and the military strength of the Prussian king. Their ow
professions, their newly-introduced popular institutions, and th
moral sense of the French democracy led them to sympathi
with the desire of the Germans for unity, however they co
strued the acts of the Prussian premier. The war theories
M. Thiers and the men of 1840 were long since repudiat
both by leaders and people—even the recollection of enormo
exactions attempted by Prussia in 1814-15 were subordinat
to the souvenir of Waterloo; and the animus toward Englan
so much expatiated upon, had brought forth commerci
treaties and an allied bond. But for this ill-timed affair
Hohenzollern, and the oft-invoked "traditional jealousy" b
tween France and Prussia, as far as the former was concern

at all events might shortly have died a natural death. The reader has not to be shown that France had no sinister end to serve in dealing with the peninsula.* The attitude of the emperor towards Spain since the overthrow of Isabella had been unexceptionable.

If there was nothing hostile in this Spanish negotiation for a Hohenzollern king, why was it—therein differing from the overtures made to other personages by the Prim regency—kept so secret until all matured? clamored the Parisian press. For many of them, not supporters of the empire, the transaction had the air of a vulgar *coup d'état*, whilst the election of an occupant to such a throne as that of Spain should have been, according to their ideas and European usage, a solemn and dignified proceeding, open to the world from its inception, and frankly conducted to its end between friendly sovereignties. It was not in French nature, we fear—if elsewhere certain to have been found—this feeling of non-resentment at being ignored, if not cozened, where they considered themselves so vitally concerned. "We do not admit," said the Duc de Grammont, French minister of foreign affairs, "that respect for the rights of a neighboring people obliges us to suffer a foreign power, by placing a prince upon the throne of Charles V., to disturb the European equilibrium to our detriment, and to imperil the interests and honor of France." Assuredly he could point back with more or less force to 1831, when Belgium was constituted, and when the five powers—Great Britain, France, Russia, Austria, and Prussia—selected Prince

* The popular idea of a perpetual spirit of conquest animating the second empire ever since its erection, is founded, we suspect, upon the periodical cry of the *Times*, and an apprehension of the English people as to French jealousy of British possessions in India, or a contemplated descent upon the English coast itself. Not only have no inimical projects toward Great Britain been put into execution, but the real conquests of Napoleon III. have been limited to a port or two in Cochin-China, a little more desert ground in Algeria, and the annexation of Nice and Savoy after a popular vote in the provinces, and subsequent to the Italian war. He may have cast longing eyes upon parts of Mexico, and would have been glad to purchase Luxembourg from the Dutch, had Bismark consented; but opportunities in the East, in Italy, and Spain were apparently neglected by the emperor, to say nothing of his perfect oversight as to his chances for the left bank of the Rhine during the Prusso-Austrian war.

Leopold and made him king of Belgium ; no one of them alo presumed to do it ; nor was the choice first submitted to the B gian people. In 1832, when Greece was left without a gover ment, Otho, son of the king of Bavaria, was named by Gr Britain, France, and Russia, and presented to the Greek nati as their ruler ; and later, in 1862, upon the flight of Otho, t voice of the Greek people was influenced by no single forei cabinet in favor of George of Denmark, but by all the pr tecting powers, as in 1832.

In his circular of last July 21st, the French foreign mini ter affirmed that the idea of raising a Hohenzollern to t Spanish throne was not a new one. In March, 1869, t French ambassador at Berlin informed Count Bismark of t antagonistic view the French government would take of a lil proceeding, and Bismark disavowed any such design. 1 be sure, a circular of the Berlin cabinet endeavored to me this statement, as to the date of the agitation touching t candidature, by a quibble ; but Europe eventually recognise no unequivocal denial of the French assertion to have bee uttered by Bismark. In the same circular of the 21st Jul M. De Grammont thus resumes his appreciation of the inc dent : "An understanding prepared clandestinely by un vowed intermediaries was, if light had not unexpectedly bee thrown upon it, to bring things to a point when the candid ture of a Prussian prince to the throne of Spain would ha been suddenly revealed to the assembled Cortes. A vote ca ried by surprise, before the Spanish people should have h time for reflection, would have proclaimed (at least such w the hope) Prince Leopold heir to the sceptre of Charles Thus Europe would have found itself in the presence of a accomplished fact ; and, speculating upon our deference f the great principle of popular sovereignty, the calculation w that France, in spite of a passing displeasure, would pau before the will of a nation thus ostensibly expressed."

The Duc de Grammont may have wrongly imputed lik views and endeavors to Count Bismark ; but he put his ow

appreciation, such as it was, tersely enough. Nor was his appreciation utterly unsupported by rational conjecture and strange appearances. Europe, including the Spanish people, had indisputably been taken by surprise. General Prim remained inscrutable, notwithstanding the charges of the Paris cabinet and press. The king of Prussia at first denied all knowledge and responsibility touching his kinsman's candidature; he afterward admitted that he was privy to it, and had authorized it, but declined to order its withdrawal because he had not commanded its acceptance; and he subsequently informed the French ambassador of its vicarious retirement, but as of a matter not his own. Mysteriously deserted for several days by his chief counsellor, he seemed left alone to make a muddle of a diplomatic emergency of nicety and importance; for he cut short negotiations by refusing, with ill humor, any pledge that Leopold's retirement should be final, or to forbid his acquiescence if renewed.

In this refusal the French government saw but the old attempt at fretting them, by indirect menace, to commit themselves to war. In the refusal was the *gravamen* of the entire circumstance, and with it were recalled, and in a more unwelcome light, the neglect of the treaty of Prague; the continued occupation of Mayence by Prussian troops; and the delayed retribution, fractional though it was, to plundered Denmark. The course pursued by France cannot be denominated extraordinary, when, upon having her suspicion a second time aroused—and that notwithstanding anterior and explicit assurances from Berlin—she ultmately insisted upon some guarantee from the king as to non-meddling with the Spanish throne. For the emperor the subject was one of prime gravity, as, in the event of war, France might find herself obliged to detach an army of two hundred thousand men to guard her Spanish rear. The cabinet of the Tuileries did not, therefore, deem itself unduly exacting; nor was its demand for sureties strange in the history of European complications. So war was proclaimed. The Duc de Grammont

dared not temporize, even had he been disposed. The constitutional ministers of France, the national representatives, the press, and the people were behind him. Had he yielded an inch he would have been ignominiously driven from office. Party differences disappeared, and all Frenchmen rallied about the government, spurred by one spontaneous impulse and conviction as to the designs of Prussia. If the ultimatum of the French cabinet did not displease Count Bismark, the promptitude with which it reached the French capital must have taken him somewhat aback, though his amazement may have been but readier satisfaction.

Sir Roger De Coverly might pronounce the Franco-Prussian question a puzzling case, and find much to say for and against either party as to the responsibility of initiating the war. Viewed in one way, we may conceive, perhaps, the bluff refusal of Prussia to bind herself to abstain therefrom as indicating persistent manœuvring in regard to the throne of Spain, which the French had repeatedly signified they would not brook; in another light, the refusal was but a childish regard of Prussia for the dignity of her king. The French, with their own experience in dealings with the Prussian minister since the day of Sadowa, affixed, as we have seen, the former interpretation. If they were not warranted in their peremptory demand for guarantees, we may ask if Prussia was overforbearing in withholding them, when, by a simple compliance, she could have prevented war? Count Bismark and his record on one hand, and on the other a Bonaparte with his career; the one in haste with his vaulting patriotism, the other exercised at the rapid rise of a haughty and bellicose neighbor, and impelled to maintain his own prestige.

It would not be marvellous had Bismark reckoned upon domestic disturbance in France, once war broke out, to aid his martial operations. Of the internal condition of the country, as well as the precise military situation, he was probably as well aware as the emperor himself. Subsequent events have pointed, with more or less distinctness, to the existence of an

re *espionage*—not French in character, but spread
Paris and perhaps the departments, and which
ve been flourishing for years. With a population of
ousand Germans in the capital itself; with German
in the army, and German soldiers in the ranks; with
, often Prussian, writers upon the staff of almost every
rinted at the seat of government; with German clerks
overnment offices, in the Bank of France, and French
cial houses; and with German courtiers at the Tuille-
was no impossible task for a not over-scrupulous min-
institute and support a secret service of incalculable
foreign cabinet foreseeing possible rupture and occu-
f French domain.

ost immediately upon the declaration of hostilities,
uantities of gold dispatched to Prussian bankers by
firms in Paris were seized at the frontier. A lady-
to the empress had maintained a political correspond-
ith the Prussian crown prince; part of that of the
s Tascher De La Pagerie was accidentally brought to
d the lady imprisoned. Year after year, it was now
l by the press, artillery officers, engineers, and drill-
ts had quitted the different corps of France to return
homes beyond the Rhine, while numbers of Germans,
uise of peasants, would seek field work in Alsace and
e during the harvest season; and *sous-officiers* made
s since the war began were recognized by farmers
ed them as common hands a year or so before. Books
d in 1869,* and earlier, were found upon the German
ntaining colored plates of all the uniforms of the im-
gions, maps of the country, plans of towns, designa-
estates, with words and phrases in common use, evi-
ompiled for the rank and file; and the topographical
ge of certain French departments in the East, pos-
y Prussian officers, it has been frequently narrated, was
plicit and accurate than that of General McMahon's

*he German Soldier in France." Julius Klonne, Berlin, 1869.

command. All of this does not compliment French honesty, wit, or prudence so much as it strengthens the notion of an elaborate and long-studied project with the guiding minds and captains of Prussia.

Everybody at the outset conceived the armaments of Prussia to be incomplete, and predicted misfortune for her arms at first, maugre the solemn appeal to heaven of the king of Prussia that his cause alone was just. Yet how many days elapsed before she had from six to seven hundred thousand men in the field,* a large army on the frontier, and three to the Frenchman's one at Woerth? though it may be untrue, what we have seen in print, that the letters for calling out the landwehr were written and addressed in the autumn of 1869. Doubtless the French supposed their barracks well filled, and their army well prepared. What the minister of war, the unhappy Marshal Le Bœuf, replied to Count De Keratry, he incontestibly believed: "You say we are ready, Marshal; but what do you mean by ready?" "If the war lasts a year, there will not be a gaiter button to provide!" was the memorable response. And yet when Marshal MacMahon reached Strasbourg with his seventy thousand men, there he was stopped a fortnight for the lack of a provision train, as he had not two days' rations for his force with which to enter German territory.

* From a careful computation which appeared in the London *Standard* newspaper, the most detailed and complete of its kind that we have seen, we gather that France possessed, previous to the war, a regular efficient force of 400,000 men, with 100,000 well-trained reserves, and 160,000 indifferently trained reserves. Prussia had a regular efficient force of 200,000 men, but upward of 600,000 well-trained reserves. The National Guard of France, over and above her forces just stated, numbered 550,000 men. Prussia had her landsturm corresponding thereto, but better drilled, having seen active service, and probably more in real aggregate. Besides the above, Prussia could count upon 100,000 regular efficient troops from South Germany, and 100,000 well-trained reserves. Prussia could put into the field, exclusive of her militia, and inclusive of the armies of South Germany, about 1,000,000 men against the 660,000 of France, likewise exclusive of militia. By the late Marshal Niel's new military system, inaugurated February, 1868, France in 1877 would have been able to dispose of between eight and nine hundred thousand men of regular and efficient force. That is, *only* in 1877 would France have been approximately on a military equality with Prussia. Compared with Prussia, military France was, with Niel's new order of things, like a lobster changing its shell when war began. These facts and figures were well known in each army. "We can conquer her, and shall conquer her to a certainty," said the Prussian Crown Prince eighteen months ago.

That the second empire, at its close, was a hideous failure, cannot be denied. To one acquainted with that science of system and detail peculiar to French governmental and military machinery, so exquisitely checked and counter-checked, such domestic corruption and foreign defeat of France appear an enigmatical wonder. That a set of knaves surrounded the ill-starred emperor is evidently the fact. Imbeciles there were in plenty, too, occupying the highest places. Shoddy contractors had thriven and favorites had been bought, and cheating and robbing had been the order of the day almost beyond conception. On paper alone, the army stood so numerous and perfect, though the exchequer had paid again and again for food and raiment of pretended soldiers, whose only military being was a name in the regimental roster. Kegs of powder, piles of bombs and shot, and cases of cartridges had been ostensibly examined and stowed away in their proper arsenals by sworn inspectors; but the powder turned out colored dust; the bombs were damaged shells; the shot were made of clay, and the cartridges with sand. Bones and shavings, hair and common dirt, were in barrels marked beef, and in cans marked vegetables, preserves, or soups; and with revelation upon revelation of this frightful state of things came the great collapse.

So surely as the whole question as to the responsibility of the war hinges not alone on the choice of a Prussian king by the Spaniards, nor altogether on Bismark's share in the negotiation of General Prim, but rather upon the integrity of the individual, and the true temper and aims of King William's prime minister, as sure is it that though every man in Europe and America might be intimately convinced that Bismark abetted the Spanish plan, still the official declaration of the Berlin cabinet, that it had never mingled in the matter, must be accepted as conclusive in Prussia's favor, until disproved by other testimony. Such was the dictum of the London Times, a partisan of Prussia throughout;* and we agree

* Early in the discussion the Times was called, by its contemporaries, the Prussian organ. The spurious secret treaty printed by this journal on the

thereto, but strictly in the diplomatic sense. Diplomacy ma
nay should, avow that, with the circular of its ministers, Pru
sia cannot be charged with having wantonly instigated th
war. The king of Prussia, in the midst of this awful combs
calls the French emperor, whose relations and people he
slaughtering day by day, "my beloved brother," accordi
to diplomatic rule. The imperial chief proclaimed to the Ge
mans that the fight was not to oppose the Teutonic race, but
curb a domineering Prussian king, yet mowed down the so
of Fatherland with his *mitralleuses*; just as diplomatical
any crowned head reiterates his promise to keep the peac
while he is actively arming and drilling, if not concoctir
war. History must scout such specious nonsense, howeve
go behind such double meaning phrases, and study the el
mentary influences, the developments, and events.

A dynastic duel had become inevitable; it had been nu
tured and reckoned upon like any crisis on settling day.
a duel the war began. There was no war, no wish for w
from man to man between the peoples, until diplomatis
hocussed, and demagogues misled or scared the masses, or t
shock of battle bred hatred and submerged the origi
wrong or truth. If in chronicling this gigantic feud histo
should refuse to register as the real one the official policy
King William, whose bulletins set forth that he assailed t
Bonapartes not France, and who yet, at Napoleon's f
pressed on to Paris, and battled with the young repub
which cried for peace; with that refusal the knot in the sk
we would unravel becomes untied.

25th July, with great flourish, was but one, although a telling instance
the animus of that paper toward France. This treaty, purporting
have been mysteriously communicated to the Times, pretended th
France had agreed to wink at the annexation of Prussia since Sado
and at any coercion toward the South German states, provided the e
peror could seize Belgium unmolested. The exposure of the manœuvr
connected with this draught of a treaty which, it was ultimately stated
believed, was suggested by Count Bismark to the French ambassador
Berlin, M. Benedetti (who made that statement), and four years ago!
latter adding that he simply reduced to writing the proposition of Co
Bismark, who, under pretext of showing it to the king, craftily retained
session of the paper, which had lain forgotten until printed by the Ti
The exposure, we say, was one of double dealing and low trickery, t
between individuals and diplomatists would be called unworthy indeed.

Again, could history demonstrate that Napoleon was to gain thereby, and so rushed to the combat which upset his throne, to France belongs the blame. To commence the war that threatened German unity, was King William's slogan—a unity no one has ever shown that France attempted to prevent, when she could have done so in its infant days—then it was Alsace and Lorraine the king demanded, with Metz and Strasbourg as sureties for peaceful German unity. Once master of these two fortresses, Paris itself and the treasures of the capital seemed to animate the Prussian's greed in the name of German unity.

ART. VII.—1. *Protoplasm; or, Life, Matter, and Mind.* By Dr. LIONEL S. BEALE. London. 1870.

2. *The Cell Doctrine: Its History and Present State.* By JAMES TYSON, M.D. Philadelphia. 1870.

3. *Protoplasm; or, the Physical Basis of Life.* Lecture by Prof. HUXLEY. "Fortnightly Review," February, 1869.

4. *Microscopic Researches into the Accordance in the Structure and Growth of Animals and Plants.* By Dr. TH. SCHWANN. Translated by HENRY SMITH. London. 1847.

5. *Contributions to Phylogenesis.* By Dr. M. J. SCHLEIDEN. Translated by HENRY SMITH. London. 1847.

THE consideration of those minute units of organic nature called cells, from whose aggregations and transformations all animal and vegetable forms are believed to result, has of late years assumed a high degree of interest. This interest arises from the publication of several original and striking views upon the subject, which dissent materially from the formerly entertained hypotheses, and are at striking variance with each other in some important points.

The question: Is there a special life-force, or merely complex chemical energy, at the basis of vitality? has lo been of interest to the scientific world; and though a gre accumulation of facts has gathered round it, we are yet f from a definite answer. The rapid increase in microscop power of late years, and the important results achieved chemical analysis and synthesis, have much increased o knowledge of the intimate nature of organic tissue, and s giving us a definite idea of the character of the intrica evolutions in organized matter. Our new information h narrowed the question down to this: Does the plastic su stance of the organic cell act through the agency of physi law, or by virtue of a special principle of vitality beyond t control of chemical force? It may be that no absolute pr can ever be brought to bear upon this subject; for possib the minute complexity of nature will always lie beyond t reach of analysis, and first principles must always be tak for granted. But first principles shift, in the minds of diff ent thinkers, from the natural to the supernatural, and t controversy may remain open as long as man continues look at the universe from these two opposite points of vie This problem involves the much debated question of the spo taneous development of organic life, which, after endl experiments *pro* and *con*, yet remains unsolved.

Before considering this controversy, it will be well glance briefly at the history of the cell doctrine, and tra it through its various evolutions down to its present sta Though Aristotle and Galen, among the ancients, were awa of the fact that the organic body is made up of a limited va ety of elementary parts, yet what they called "element were but what the modern world calls "tissues," and knowledge of the real organic "element" was gained un after the invention of the compound microscope—which credited to the Jansens, father and son, of Holland—ab 1590. All our real acquaintance with the intimate structu of nature dates from this invention, which has given the e

of science a power of vision reaching so far into the kingdom of the minute, that it seems as if only the infinitely small can ultimately escape its research.

During the seventeenth century, numerous observers applied the microscope to an examination of animal tissue, discovering the blood and pus corpuscles, the capillaries, and various other of the more minute constituents of the body. Robert Hooke observed, in 1667, the cellular structure of plants. This subject was further considered by Malpighi in 1670, in his "Anatome Plantarum." He showed that the cells or vesicles could be isolated, and believed each to possess an independent existence.

But the first intelligent attempt to reduce organic forms into an ultimate physical element was made by Haller, who wrote in 1757. In his hypothesis, the cellular tissues of animals and plants are composed of fibre and of organised concrete. The latter substance he considers to be a species of concreted glue filling the spaces between the fibres. Wolf, whose experiments were made about the same period, believed the organs to consist at first of a mass of clear, viscous, nutritive fluid, without organisation. In this semi fluid mass are formed cavities, which, if they remain rounded or polygonal, become cells—if they elongate, produce the subsequent vessels; the process being identically the same in plants and animals. In the plant the cells at first communicate, but are afterward separated; in the animal they always remain in communication. "In each case they are mere cavities, and not independent entities; organization is not affected by them, but they are the visible results of the action of the organizing power inherent in the living mass." These views differ radically from those now entertained, both in regard to the non-independence of the cell, and in the belief that organs are formed from differentiation in a living mass of organic fluid.

The fibre theory of Haller, however, held the ground until the latter part of the eighteenth century, when a number of

observers recognised the importance of the globule as an ultimate element of organic tissue. These globules were discovered in the brain, in the muscular fibre, and finally were considered by Heusinger as the starting point of all tissues. Henle describes the views of Heusinger as follows: "As the result of an equal contest between contraction and expansion, there arises the globule, of which all organisms are originally composed. Where, in an organism, *globules* and a *formless mass* are present, the globules arrange themselves according to chemical laws and form *fibres*. By a stronger exercise of power, the *vesicle* originates from the often mere homogeneous globule. Where vesicles arrange themselves, there arise *canals* and *vessels*."*

The globule hypothesis was still further extended by Milne Edwards in 1821. He closely examined the fibrous tissues, and declared them to be composed of globules of about one-eight-thousandth of an inch in diameter, and that all organic textures were formed by an aggregation of these globules.

This idea of the important agency of a supposed homogeneous globule in organic tissues, yielded to a belief in their cellular composition. We have seen that the presence of vesicles or cells in the organs of animals and plants had long been believed; but their primary importance was first declared in 1838, when the publications of Schleiden and Schwann opened a new era in the history of organic science.

Dr. Robert Brown, of Edinburgh, had in 1833 demonstrated the existence of the cell "nucleus," and Raspail had in 1837 recognised the reproductive property of the cell; but he considered this cell as formed of granules spirally arranged about an ideal axis, assimilating it to the crystal in its mode of formation.

Schleiden, describing the nucleus as discovered by Robert Brown, gives it the name of cytoblast, or "cell bud." He speaks of it as a minute, yellowish oval or circular body,

* Henle's *Allgemeine Anatomie*, p. 128.

rying in diameter from 0.0022 to 0.0001 Paris inch. Its ructure is generally granulous; its consistence varying from softness that will almost dissolve in water, to a considerable rmness. He says: "In very large and beautifully devel-ed cytoblasts, there is observed a small, sharply-defined dy, which, judging from the shadow which it casts, appears represent a thick ring, or a thick-walled, hollow globule."* is constitutes what has since been known as the "nucleo-," of which two, three, and sometimes four have been erved in a single nucleus.

He considers starch in the plant, as fat in the animal, to a "superfluous nutritive material, deposited for future ."† When about to be used in new formations it is nged into sugar or gum, which forms homogeneous fluids which minute granules soon appear. Larger, sharply-ned granules next appear, forming the nucleolus, around ich the smaller granules aggregate to form the nucleus. er these have grown to their full size, in a free state, a icate, transparent vesicle rises upon their surface. This stitutes the cell wall. It rapidly increases, till the cyto-st appears as a small body, enclosed on one of the side lls. Within these cells (as well as in the fluid without) w cells arise, which fill up and absorb the mother cell.

The theory of *exogenous free cell formation* in vegetables s applied by Schwann to animal tissues. He views the cleolus and nucleus as forming from a homogeneous blas-ma, precisely as in Schleiden's views. This nucleus grows the deposition of new molecules between those already isting. The nucleus may remain solid if the molecules are ually deposited through its whole substance, or it may be-me hollow if they are deposited principally on its surface. hen it has developed to a certain stage, a cell wall is formed ound it. This outer stratum he believes to differ in sub-

* *Contributions to Phylogenesis*, p. 224.

† *Ibid*, p. 236.

stance from the blastema from which it is formed. This stratum thickens, by the deposition of new material, into membrane, which expands by the same process of deposition becoming separated from the nucleus. The space between the nucleus and membrane becomes filled with fluid, which constitutes the cell contents, the nucleus remaining attached to a spot on the inner surface of the membrane. These views, as well as his views of cell multiplication, are identical with those of Schleiden, his merit resting in their application to animal tissue, in which observation is so much more difficult than in the case of plants, to which Schleiden confined his experiments.

Schwann's location of the nucleus in contact with the cell wall does not agree with the results of modern observation which show the nucleus to be usually central in position. So the primary importance of the nucleolus is no longer a part of the cell theory. But considering their powers of observation, the results obtained by these two explorers are of the highest value, and in many points still constitute accepted data of science.

In 1841 Henle published his observations. These agree essentially with the preceding views, except that he recognises three modes of cell multiplication—by budding, by production within previous cells, and by division. This latter mode was hesitatingly acknowledged by Schwann, who, however, failed to perceive its importance. Henle makes no mention of the nucleus, as concerned in this process of division, describing the cell wall as furrowed, deeper and deeper until division takes place. Dr. Martin Barry, in 1841, first clearly enunciated the modern idea of cell multiplication. He says:

"I am very much inclined to believe that in the many instances which the authors on 'cells' have described and figured more than one nucleolus in a nucleus, there has been either an incipient division of the nucleus into discs, or the nucleus has consisted of two or more discs, the nucleoli of those authors having been the minute and high-refracting cavities or depressions in the discs. If this has really been

the case, it affords evidence that reproduction of cells by the process I have described—namely, by *division of the nucleus* of the parent cell—is universal."*

In 1845 Prof. John Goodsir, in his "Centres of Nutrition," showed the power of these centres to gather nutritive materials from exterior sources, and to distribute them by development to the different organs. He views each organ as originating in one central or capital cell. "It would appear that from this central cell all the other cells of its department derive their origin. It is the mother of all those within its own territory. It has absorbed nutriment for them while in a state of development, and has either passed them off after they have been fully formed, or have arrived at a stage of growth when they can be developed by their own powers. A nutritive centre, anatomically considered, is merely a cell, the nucleus of which is the permanent source of successive broods of young cells, which from time to time fill the cavity of their parent, pass off in certain directions and under various forms, according to the texture or organ of which their parent forms a part."† This is distinctly opposed to the previous doctrine of free cell growth within a homogeneous blastema, and enunciates the theory of *omnis cellula e cellulâ*, to which the extended observations of Prof. Virchow have since given such weight.

The idea of free cell growth, however, is still entertained by many eminent physiologists. Dr. Bennett, of Edinburgh, in 1853, published views which he has lately reiterated. He believes that "the ultimate parts of organisation are not cells nor nuclei, but the minute molecules from which these are formed." He views these as possessing independent vital powers, and arranging themselves directly into cells, fibres, and membranes. Todd and Bowman, in 1856, and Dr. Carpenter, in 1865, believe in occasional free cell development.

* *Philosophical Translations for* 1841, pp. 207-8.

† Article in "Anatomical and Pathological Observations," 1845.

In 1858 appeared Prof. Virchow's "Cellular Pathology." The cell, in his hypothesis, consists of cell wall, cell content and nucleus, the life of the cell being confined to the nucleu its function to the cell contents. He does not—in his lat expressed views—consider the cell wall an essential featur but supposes that a nucleus surrounded by a molecular bla tema is sufficient to form a cell. The physical life of t body wholly resides in these cells. He believes, with Pr Goodsir, that the cells are aggregated into special territori or communities, the cells of which are dependent on ea other and on a central cell from which they originated. T intercellular substance, in his view, depends upon the c which it surrounds, sharp boundaries often dividing t material pertaining to one cell from that belonging to a other.

He believes all cell growth, whether productive of healt or morbid tissue, except epithelium, to result from the me morphoses of a special cell. This cell is that of the m extensive tissue of the body, the connective tissue, which found in the structure of all the organs. In the formation this tissue we have the multiplication of the primitive c without change of character. In other conditions it multipli under secondary forms, producing cells adapted for spec functions, as the muscular and nervous fibres. The cells diseased formations have no special properties, but are sim lar to healthy cells of other organs. Virchow says: "It mu be laid down in advance, as a fundamental principle, th whatever man produces will be something human, and wh an animal produces will be something animal." No type c cell can appear in disease not natural to the healthy body but when cells normal to one territory show themselves out o place, by peculiar conditions affecting the connective tissue they constitute a diseased formation, in which, as in cancer they may increase indefinitely.

Virchow further supposes that, by anastomosis of one ce with another, canals or tubes are formed, which are supp

mentary to the blood and lymphatic vessels. In this view he is sustained by most German histologists, though it finds little favor with English and American writers. Such are the main points in the doctrine of the great German authority on 'cell life," and fairly represent the subject as it stood ten years ago.

The French histologists, however, differ from the Germans in their doctrines of organic formation. The views of M. Robin, who is a fair representative of the French school, are as follows: He looks upon the animal frame as made up of elementary forms of which he finds three varieties—fibres, tubes, and cells. These fibres are often of great length, as in the nervous fibres, their diameter frequently not greater than .001 millimetre. The capillaries illustrate the tubular element. They are formed in new tissues by the growth of tubular projections from contiguous capillaries, these projections meeting and uniting to form new tubes. His idea of the cell contains nothing essentially different from those already noticed. He distinguishes four features in the production of these elements, named respectively, segmentation, genesis, epigenesis, and germination. The yolk of the ovum consists of granular matter in a hyaline substance. These granular particles aggregate to form a nucleus. Segmentation originates in this nucleus, the yolk separating into numerous globules. The second mode of growth operates when the globules have become very small by successive segmentation. They now dissolve, producing a blastema, in which nuclei soon appear. Epigenesis consists in the growth of prolongations of transparent matter at the extremity of these nuclei, producing the fusiform bodies, which originate the connective tissue. We have seen how Virchow supposes the whole body to result from the growth and transformation of the cells of this tissue. Germination is almost wholly confined to vegetables, being the process known as budding, in which a prolongation of the cellular mass becomes separated from its parent cell, and grows into an independent cell capable of similar increase.

The only animal example known of this mode of increa takes place in the ovum previous to fecundation. From t hyaline substance of the yolk. prolongations issue, which b come round, separate, and begin an independent existenc He teaches the doctrine of free cell formation; believing th cellular masses originate directly, by genesis, from the blas ma of the blood.

Many other writers have communicated interesting fa concerning the growth and function of the cell. It has lo been known that a peculiar contractile power belonged to t substance of the lower animals, which was attributed to material called sarcode. Max Schultze, in 1861, showed th this sarcode was analogous in character to the contents of t animal cell, and that the world of infusorial animals is entir made up of cells, in many cases a single cell composing a co plete animal.

The idea of the cell being a vesicle of fluid enclosed in defined wall had been doubted by various previous observe and was expressly denied by Schultze. He defined the c as *protoplasm surrounding a nucleus*. This was the first cl declaration of the more modern idea of cell life. In his wor "the cell leads in itself an independent life, of which the p toplasm is especially the seat, although to the nucleus, al undoubtedly falls a most important, though not yet precis determined, *rôle*. Protoplasm is for the most part no furth distinct than that it will not commingle with the surrounding m dium, and in the peculiarity that with the nucleus it forms unit. Upon the surface of the protoplasm there may form membrane, which, although derived from it, may be chemical different, and the assertion that it is the beginning of a retrogr sion may be defended. A cell with a membrane cannot divi itself, unless the protoplasm within the membrane also divid itself."* Later observers show that even the nucleus is n an essential part of the cell, giving several instances in t lower animal creation of single celled animals without nucl

* *Protoplasm der Rhizopoden*, 1863.

With this brief historical sketch of the doctrine of cell life, we are prepared to examine more in detail the hypotheses of Professors Beale and Huxley, and to give a fuller description of the characteristics of the unit of organic life.

This unit consists of minute individual particles of a peculiar compound of the four principal elements—oxygen, hydrogen, carbon, and nitrogen. The cell, then, reduced to its necessary principles, is a minute mass of a transparent jelly-like substance, without essential form, color, or structure. This transparent jelly has peculiar powers. If the stinging hair of the common nettle be examined under high microscopic power it will be found to consist of a delicate sheath of wood, containing a semi-fluid mass of protoplasm, which is full of minute granules. Within this layer of protoplasm is a limpid fluid. The protoplasm is incessantly active. It is subject to slowly-moving contractions, which pass along it in a wave-like movement. In addition to this display of activity, the granular particles flow in steady streams through channels in the protoplasm. Adjacent currents usually flow in similar directions, streaming up one side of the hair and down the other. But partial currents exist which flow in opposite directions. Thus, occasionally, trains of granules are seen flowing swiftly in opposite directions, within a twenty-thousandth of an inch of each other. Sometimes such streams come in contact, and a struggle ensues until the stronger predominates. These motions are supposed to result from contractions of the protoplasmic substance, which are too minute to be seen by the best microscopes.

This power of spontaneous movement characterizes all forms of protoplasm. In all cases, whether in the undefined particle of jelly called the Amœba, or in the free cell of a complex animal, a special mobility is displayed. In the single-celled animals and plants the variation of form is incessant. So in the colorless corpuscle of the blood of the higher animals a similar movement appears. It sends out prolongations of its substance, and creeps about as if endued with life. Huxley says:

"The substance which is thus active is a mass of protoplasm, a[illegible]d its activity differs in detail rather than in principle from that of t[illegible]e protoplasm of the nettle. Corpuscles of essentially similar structu[illegible]re are to be found in the skin, in the lining of the mouth, and scatter[illegible]d through the whole framework of the body. Nay, more: in the earli[illegible]st condition of the human organism, in that state in which it has just b[illegible]e-come distinguishable from the egg in which it arises, it is nothing b[illegible]ut an aggregation of such corpuscles; and every organ of the body w[illegible]s, once, no more than such an aggregation. Thus a nucleated mass of protoplasm turns out to be what may be termed the structural unit of the human body. As a matter of fact, the body, in its earliest state, i[illegible] a mere multiple of such units, and, in its perfect condition, it is a multi[illegible]ple of such units variously modified. Beast and bird, reptile and fi[illegible]sh, mollusk, worm, and polype are all composed of structural units of t[illegible]he same character; namely, masses of protoplasm with a nucleus. At t[illegible]he very bottom of the animal scale even this simplicity becomes simplifi[illegible]ed, and all the phenomena of life are manifested by *a particle of protopla[illegible]sm without a nucleus.*

"What has been said of the animal is no less true of the plant. I[illegible]m-bedded in the protoplasm of the broad or attached end of the ne[illegible]ttle hair, lies a spheroidal nucleus. Careful examination proves that [illegible]the whole nettle is made up of similar masses of protoplasm, each contai[illegible]ned in a wooden case. Traced back to its earliest state, the nettle arises[illegible] as the man does, in a particle of nucleated protoplasm. And in the low[illegible]est plants, as in the lowest animals, a single mass of such protoplasm m[illegible]ay constitute the whole plant, or the protoplasm may exist without[illegible] a nucleus. It may well be asked, then, why we call one such mass 'pla[illegible]nt' and the other 'animal.' The only reply is that, so far as form is c[illegible]on-cerned, animals and plants are not separable, and that, in many ca[illegible]ses, it is a mere matter of convention whether we call a given organism an animal or a plant."*

Protoplasm is a voracious feeder, and needs a consta[illegible]nt supply of aliment. If it be surrounded by a fluid mass of alimentary matter, it is found rapidly to absorb it and expa[illegible]nd in bulk. This expansion is soon followed by division in[illegible]to two cells, a line of constriction passing through the nucle[illegible]us, till the globular mass assumes a dumb-bell shape, and fina[illegible]lly separates into two portions, each of which is capable of sim[illegible]i-lar increase. If the food supply fails, the cell loses its

* London *Fortnightly Review*, February, 1869.

ility, gathers into a spherical mass, contracts in size, and lly dies of sheer starvation.

Various writers have considered these minute organic s as preserving an individual life even when composing a ion of a complex animal. Schleiden says: "Each cell s a double life: an independent one, pertaining to its own elopment alone, and another incidental, in so far as it has ome an integral part of a plant. It is, however, easy to ceive that the vital process of the individual cells must n the first, absolutely indispensable basis."* This thought been extended by other writers, who consider each higher mal or plant as a community of individual cells, each with own life force and its independent existence; as complete individual, in fact, as are those minute beings which con- t each of a single cell. This idea has an analogy in those nmunities of polypes, each individual of which performs a cial function; so that the life of any member of the com- unity is dependent on the action of all the others, just as the of the cell of an animal organ is dependent on the mutual ion of all the organs. Certainly, when we see the free cell the human body to be similar in form and function to the gle-celled animal, moving, growing, and multiplying in the ne manner, the conclusion is natural that the one possesses distinct an individual life as the other, the only apparent erence being that one is adapted to derive its aliment from juices of the animal body, the other from free fluids. re is thus no essential difference, in condition and charac- between the two, and the one has as much real claim to title of individual as the other.

The previous considerations lead us to Dr. Beale's hypoth- s. This latest of the cellular hypotheses has certainly the rit of originality, and reduces the phenomena of cell func- n to a simplicity, which, in itself, predisposes us to accept even if we must question some of his conclusions. In this pothesis there are three forms of material in the animal

* *Contributions to Phylogenesis*, p. 232.

body, named, respectively, *alimentary*, *living*, and *formed matter*. He uses this phrase, "living matter," to replace the term "protoplasm," which he considers to have become indefinite in meaning, from being applied to various distinct substances by different writers. In a late work he replaces this phrase by the new-coined word "bioplasm," which certainly is not an inapt term to replace protoplasm, though we cannot perceive why the latter is not sufficient for the purpose.

This bioplasm includes the nucleus, protoplasm, and cell-contents of other writers. It composes the central portion of the cell, the formed matter being deposited upon its surface. He describes it as a transparent, colorless, and structureless substance. The simplest animals and plants, and, in the higher animals, the pus and white-blood corpuscles, are nearly pure bioplasm. In it alone reside the properties of spontaneous motion, growth, and multiplication. From the alimentary matter with which it is surrounded it produces new bioplasm, grows and divides, each separated portion commencing an independent existence and manifesting these same properties. It may be stained by an ammoniacal solution of carmine; and the younger it is the deeper stain it takes—this stain clearly showing the limits between the living and the formed matter. Bioplasm is not confined to the nucleus. The nucleus may be simply a new centre of living matter, surrounded by older bioplasm. The nucleolus, which takes a deeper stain, is a still younger centre. Only by use of the stain is it possible to define the limits of the bioplasm; as in some cases it is confined to the nucleus, in others it comprises part or all of the cell-contents.

Upon the surface of this bioplasm gathers a layer of formed matter, which has lost the active properties of the former, and is distinguished as passive, or dead material. Its increase is at the expense of the bioplasm, which in certain cases entirely dies, or becomes formed matter. In this matter reside the properties of the tissues of which it forms

part, as the contractility of muscle and the neurility of nerve. It is protective in epithelium, diffluent in the milk cell, hard and elastic in cartilage. It is not stained by the solution of carmine; or, if it takes a stain, this may be washed out by glycerine, which has no effect on stained bioplasm. He supposes this stain to result from an acid reaction of the bioplasm, which precipitates the carmine from its alkaline solution.

The particles of bioplasm vary in size from one one-hundred-thousandth to one five-hundredth of an inch in diamter. It seldom attains the latter size without division into smaller particles. As composing the nuclei of fully-formed cells, it varies usually from one three-thousandth to one six-thousandth of an inch in diameter.

In the growth of epithelium, we have a good instance of the mode of production of formed material. In the deeper layers the cells are almost pure bioplasm. These grow and divide, pressing the older cells outward. As the cells thus move toward the surface, the bioplasm grows by absorption of the alimentary material, while the conversion of a portion of it into formed material increases its passive exterior layer. Thus, up to a certain point, both constituents of the cell increase, the cells, in consequence, constantly growing. As these cells are pushed further out, however, by the production of new ones in the interior, the layer of formed material becomes so thick and dense as to hinder the aliment from readily penetrating to the bioplasm. This, then, ceases to increase in quantity, and, being constantly changed into formed material, it follows that, when the cell reaches the surface, the bioplasm has become nearly or wholly converted into formed material, the exfoliations of the skin being confined to this dead or passive substance. If, then, a cell contain a large excess of bioplasm, we may consider it as young; but if the formed material is largely in excess, the cell is old and has become inactive.

Every cell comes from a pre-existing cell originating only in the bioplasm. The division of this is not generally sym-

metrical, as is so often described, but rather resembles a budding and dropping off of portions of bioplasm, which grow to form the new cell. The bioplasm is alone concerned in cell nutrition, taking up the pabulum of the blood, which is converted first into new bioplasm, and eventually into formed material. The thickening of this layer of formed material hinders absorption, and the unfed bioplasm, which is constantly assuming the passive or "formed" condition at its surface, gradually shrinks and disappears.

Dr. Tyson agrees with Dr. Beale in the main points of his doctrine, and is fully convinced that the cell comprises a living and active centre, enclosed by a mass of passive formed material. But in some particulars he dissents, saying that, "in appearance, living or germinal matter is *often* structureless, especially as constituting the living, moving matter of the protozoa, or lowest animals of the rhizopod type. Yet it is not always structureless, but often *granular* in its appearance, and as constituting the mass of rapidly-growing cells in the higher animals is, indeed, *usually* granular."* These granules are shown to form part of the bioplasm, by their being the portions most deeply stained by the carmine.

"In the nutrition of the cell, the pabulum comes to it from the periphery, being strained through the formed material, and the new germinal matter takes its place in or near the centre of the original mass, constituting a new centre of germinal matter, which may be the nucleus, if no other circumscribed centre be present, or the nucleolis, if it be deposited within such a centre. Other new centres may again take position within these, and assume the relation of nucleolus to the original nucleolus, which now becomes the nucleus—an old centre of germinal matter—while the original nucleus has probably been converted into the second constituent of the cell, the formed material."†

Germinal or living matter—or bioplasm, as Beale now prefers to term it—has motive powers, both of part of its substance causing change of shape, and of the entire mass producing change of position. These movements are probably

* *Cell Doctrine*, p. 107. † *Ibid*, p. 109.

ended to obtain pabulum, as is plainly seen in the actions the Amœba, which embraces a particle of food by its pro-sions. "These movements are less decided in the cells of higher animals, but are of constant occurrence."[a]

The bioplasm is converted into formed material by influ-ces, "some of which may partake of the character of oxida-ns." The formed material is as essential to the functions the animal as the bioplasm. In fact, in this portion of the l all its function resides. It is not correct, then, to speak it as dead, when it so often displays vital endowments, as the properties of muscle and nerve. The exterior portion the cell is the oldest formed matter, the youngest lying xt to the bioplasm. Intercellular substance, whether of tilage or white fibrous tissue, is formed material, resulting m conversion of bioplasm, and is not a differentiated deposit m the blood-vessels.

It will be seen that these new views entirely reverse the er views of cell life. They claim that the cell, instead of ing a vesicle—as held by the elder and by many later servers—is rarely vesicular, but generally more or less solid oughout. A like change is seen in the theory of cell owth. Schleiden and Schwann taught the following order succession: First, the nucleolus; second, the nucleus; ally, the cell wall, embracing the cell contents. Now, the ll wall, when present, is considered the oldest part of the ll, the contents next in age, the nucleus younger, and the cleolus youngest.

Dr. Beale describes several modes of formation of tissue m bioplastic matter. Thus, at the extremities of the roots d twigs of plants, prolongations of this living matter are oduced, which burrow into the mass of nutriment in front, edily absorbing it, and thus growing outwardly. In the r, or portion furthest removed from the nutriment, formed tter is produced. Thus the growth of the plant continues, living bioplasm constantly extending outward toward the of the extremities, and building woody tissue behind it.

[a] *Cell Doctrine*, p. 109.

In an opposite case, that of the growth of a human hair, the bioplasm lies at the base of the hair, deriving its nutriment from the interior pabulum, while formed matter is produced on its outer surface. This formed matter is pushed outwardly, as produced, till the complete hair consists of a long line of formed matter, with an active nucleus at its root.

May we not class both these forms of growth as vegetable? In the plant the formed matter is fixed and the bioplasm free to move; in the hair, the bioplasm, acting inwardly, is fixed, the formed matter, produced outwardly, is free to move; but the character of growth in both is essentially the same. Do not these examples illustrate the distinctive character of vegetable growth, absorption of aliment in vegetables occurring at a single fixed portion of the living matter, while production of formed matter occurs at the opposite portion, so that the plant growns linearly? We may assume animal growth to be characterized by a different and more advanced type, by supposing that in the animal cell the actions of absorption and formation take place simultaneously at all points of the surface, so as to produce globular extension. Thus the line or cylinder is the type of plant formation; the globe typifies the animal. But the animal is not lifted entirely above the vegetable kingdom of nature, nor is the plant utterly below the animal. There are points where the two kingdoms touch and commingle: animal life being a constant struggle to ascend above the vegetable; plant-life a struggle to enter the animal kingdom.

Thus we perceive the animal tending to linear growth in its extremities, or at the points least essential to life, while the globular rounding of these extremities shows the preponderence of animal force. In the hair, horns, and claws the growth is decidedly vegetable. In the more essential portions of the animal economy, the tendency to the globular form becomes more decided. The necessary organs of animal life, the heart, lungs, liver, etc., are all of a rounded form. The most essential portion of the highest animal, the head of man, is al-

a complete globe. As man deteriorates in intellect this larity decreases. In the lower animals the linear tendeney rs in the head, particularly in the portions removed the brain. The brain itself, the culmination of the l, retains its globularity, even where the head is decid- inear.

the vegetable we perceive the superior product, the strongly simulating this globular tendency of the animal, the less essential portions of the tree are linear in h, and end in sharp points. Thus, in the fruit and seed nts, we have instances of a progression towards the animal of growth. We are aware that it is just these higher cts of the plant which form the chief vegetable food of while the leaf, which is so largely eaten by animals, is nmature form from which the fruit arises, and may, ps, contain the connecting link between linear and ical growth.

his argument, from exterior form, is sustained by facts in on to cell growth. We have seen how the cell of the grows linearly, while the free animal cell encases itself globe of formed matter, or grows spherically. Now, in portions of the animal economy which most simulate growth, namely, the fibres, it can be shown that the type owth is essentially vegetable. Thus, in the fibre of mus- tissue, the germinal matter moves onward in one direc- being converted at its posterior end into fibrous tissue, it absorbs pabulum in front. This is the precise action ave seen occurring in the plant. The fibres of yellow c tissue are formed in the same manner. So nerve fibre ilarly produced. Dr. Beale says: "In its young state tissue is composed of masses of germinal matter, linearly ged, and in close proximity." As conversion into d matter takes place, these masses separate, each moving rd and producing formed matter behind its direction of n, thus producing a fibrous tissue. These tissues of -like formation constitute the agencies of animal motion,

and are possibly inferior in character to the agencies of growth and of thought.

In the plant, on the contrary, we know that the fruit has another strong point of animal resemblance, besides that of form, in its power of absorbing oxygen and excreting carbonic acid, an action at variance with the normal action of the tree, and similar to that of animals.

While the fruit thus displays animal function as well as animal form, animal cells may be shown to display the normal vegetable function. In a paper read before a late meeting of the Association of German Naturalists, by Herr Wundt, he says:

"It used to be thought that the vegetable cell had to form organic matter, the animal cell to destroy it, so that by its alternation of creation and destruction the general end of life might be attained. At present we are compelled to admit that, if the vegetable cell is the seat of a phenomenon of reduction by which carbonic acid is decomposed into its elements, a similar phenomenon is produced in the animal cell. Non-azotized combinations, it is now known, can be produced in the interior of the animal cell. Alexander Schmidt was the first to observe that, 'after addition of carbonic acid to blood, the total contents of carbonic acid diminished in certain circumstances.' This observation furnishes direct support to the idea of a phenomenon of reduction. The blood globule plays, therefore, a part analogous to that played by chlorophyll in the vegetable cell in contact with the carbonic acid of the atmosphere. The only difference which exists is, that in the blood cell there is, besides, a process of oxidation going on which surpasses the process of reduction. Just as chlorophyll absorbs carbonic acid so does the colorless corpuscle absorb oxygen, and this corresponds completely to the absorption of oxygen by the blood cell in the lungs."*

The modes of composition of the plant and animal seem the necessary conditions for their special types of growth to operate. The masses of protoplasm in the plants are each surrounded by a wooden case, which cases are joined together, the growth being linear within these cases. In the animal, the particles of protoplasm are imbedded in a mass of interstitial formed matter, which separates them from each other, and which is everywhere permeated by the alimentary matter required by the cell.

* *Quarterly Journal of Microscopic Science*, 1869, p. 179.

But to say that growth is in a line or in a sphere is not ient. What is the primary cause of these modes of th? There must be some essential cause which dis- ishes whether a certain germ shall produce a plant or an al. This cause, most probably, is a motive one, there one peculiar mode of motion essential to the vegetable ition, and lifting it above the inorganic world, and a sec- mode of motion which is peculiar to the animal. That of lant is possibly a property of spiral motion, that of the al a vortical motive relation; the first typified in the anic world by the magnet, the second by the galvanic ry.

The spiral force of motion in the plant is productive of its idrical form and of its pointed extremities, which are the ral results of such a force. The peculiar spiral fibres of lant, of which no use is known, are perhaps the visible of this motive process, particularly as their formation be seen to result from the normal growth of the cell.

Schleiden tells us that "the universal and altogether abso- fact at which we first arrive is, that these spiral fibres are r formed free, but are developed in the interior of cells." e cells have, in the young state, simple and very delicate . They are filled with starch, which is first converted gum, and then into jelly. "This jelly is converted, at uter surface, into vegetable fibre, following the direction spiral line. The idea involuntarily forces itself upon the l, that the spiral formation is the result of a spiral move- t on the walls of cells between them and the central ." This fibre first appears as spiral stria upon the jelly. e stria next become lines on a cylinder or cone of gela- within the cell. The jelly next appears as a broad spiral l, whose surface displays delicate fibres. Eventually, in e cases, the whole of the jelly is converted into spiral . This process occurs in all cells, under certain circum- ces, and "the influence of the spiral fibre remains alto- ier obscure and unexplained."* There is certainly strong

* *Contributions to Phylogenesis*, pp. 245–7.

evidence in favor of the spiral motive force in vegetable life.

In animal cells, though the vortical force of motion does not mark out its mode of operation so evidently, yet the fact that it draws in aliment and secretes formed matter at the whole periphery, tends directly to this conclusion. The whole animal economy is a succession of vortices. Whether we consider the blood, the nervous fluid, or the various other agencies, each follows the line of a vortex, the heart being the centre of the circulation, the brain of the nerve currents, etc. The vortex would produce a globe, were not other agencies at work here, as we have seen, partly of a vegetable growth force. We perceive the preponderance of the vortical agency in the rounded extremities of the longitudinal limbs, and of the bones, so markedly different from the pointed extremities of plants. We will consider this idea more fully, in its application to cells, further on.

Dr. Beale uses the term, "living matter," in a real, not in a figurative sense. He takes strong exception to Huxley's idea of chemical agency in the action of the cell, and argues that the powers displayed by his "living matter" are inexplicable by any of the known laws of nature. He thinks its power of spontaneous movement beyond the ability of natural law, as also its power of forming material similar to itself out of the aliment conveyed by the blood. Dr. Tyson agrees with him in supposing that the faculty displayed by bioplasm to form new bioplasm out of pabulum unlike itself, is evidence of a force above the physical forces of nature. They credit the cell with a property of life or vitality entirely removed from the kingdom of physics, and supernatural in its origin and character. Yet it is always unsafe to declare a fact inexplicable simply because we cannot explain it, and to place the causes of observed phenomena beyond the limits of nature because they are not visible to us within those limits. Former observers have not felt it necessary to remove the difficulty into the realm of the supernatural. Prof. Huxley declares

the matter of life is composed of ordinary matter, and
ıgain resolved into ordinary matter when its work is
ɛ. "A solution of smelling salts in water, with an in-
esimal proportion of some other saline matters, contains
the elementary bodies which enter into protoplasm.
an animal cannot make protoplasm. It must take it
ly made from some other animal or plant, the animal's
ıest feat of constructive chemistry being to convert dead
oplasm into the living matter of life, which is appro-
te to itself. The plant, however, takes carbonic acid,
ɐr, and ammonia, and converts it to the same stage of
ıg protoplasm with itself, though some of the fungi need
ıer compounds to start with. These elements are related
he protoplasm of the plant as the protoplasm of the plant
he animal. But protoplasm once produced, all the phe-
ıena exhibited by it are simply its properties, just as the
nomena exhibited by water in its various stages are prop-
ɛs. They do not take place through the guidance of any
ciple called 'vitality,' any more than the phenomena of
ɐr take place by virtue of 'aquosity.'"

We might adduce numerous other expressions of the high-
authorities on this subject, all tending to the same con-
ion; but these must suffice. Unless the peculiar activity
he cell is proved to be really spontaneous, and to operate
rely from the force of some internal impulse, without refer-
ɛ to exterior circumstances, no "vital" agency of action
be maintained. If its motion results from exterior influ-
ɛs, it has no more vitality than the magnet or the falling
e. We have, in these, movements of matter toward other
ɐr, produced by causes which we have agreed to call
ıgnetism" and "gravitation," but of whose character we
ıs ignorant as we are of the nature of the special force of
ɛell.

The cell movements are not made at random, but always
ıe direction of pabulum, and are perhaps governed in
ıt by the quantity and contiguity of the aliment. This

seems to point to an attractive relation between the two forms of matter as its cause, the protoplasm moving towards matter for which it has a chemical affinity, just as the magnet moves towards matter for which it has a magnetic attraction. This seems an external, not an internal, relation of force.

If the pabulum be removed, the life force ceases to act, the cell obeys the law of fluid aggregation and becomes a sphere. Were it a real vitality it should display greater activity where the removal of the pabulum rendered this necessary. If it be simply an attraction, the action is clearly explicable. For we see that, when the strong exterior attraction ceases to act, the weaker attraction to the centre displays itself, and the spherical form results.

Beale's hypothesis seems to claim that there is an essential distinction between the germinal and the formed matter, expressed by the opposite terms "living" and "dead," the living force of the protoplasm elaborating the aliment into a third form of matter, which is deposited on its surface. But the only apparent warrant he has for this is, that the interior substance is stained by carmine, while the exterior is not. This is not enough for so radical an assertion. He admits that the stain grows fainter from centre to surface. It will be difficult then to prove a dividing line, where one sort of matter ends and another commences. It seems far more probable that a gradual solidification of the exterior matter is the cause of its inactivity, it becoming passive as it becomes stiffened and membraneous. This stiffening of the external layers is probably not sufficient to hinder the action of osmose, though it may render these layers chemically inactive, the absorbed material passing through them and being affected by the more active interior substance.

The newest formed part of the cell then, being the most plastic, displays the greatest chemical activity. The pabulum thus passes to the new formed centre, is converted into protoplasm, and in its turn displays a similar activity. Thus we may suppose the absorbed material as being converted first

plasm in a greater and greater degree as it approaches centre, this force of conversion being greatest in the olus, or centre of activity. With our present knowledge emistry we are unable to understand the reactions taking within the cell, but this does not warrant us to ascribe to vitality. There are known chemical actions quite as erious to us. The chemical force called catalysis pro- changes for which we are unable to account. It shows ow a substance, itself inactive, can induce chemical ge in a second substance, through some unknown in- ce of contact.

may be possible that the active protoplasm of the cell es a catalyptic change in the absorbed material. We that this alimentary material contains the elements of plasm, though probably some of them in excess of the t proportions. The influence of contact with the active plasm may possibly cause a production of new proto- from the aliment, by a breaking up of its former com- on and a recomposition of its elements in the proper rtions to form this substance. Though we have no ly analogous instance of chemical action, it seems more nable to suppose the possibility of such an action, than te the last refuge of despairing science, and place the action in the kingdom of the supernatural.

such a case the residual matter, not concerned in the osition of the protoplasm, may combine into a new com- l, probably acid in its character. Under such an hy- sis we have a recomposition of the pabulum into proto- , and an acid residue. The latter being foreign to the of the cell, is ejected by exosmose, and may form the of the tissues, which are known to give an acid reac- while its constant formation in the cell may give the reaction which Beale supposes to produce the precipita- f carmine.

et us consider the circumstances affecting the cell. It contact with an alkaline fluid, containing material neces-

sary for its increase, and has an acid reaction interiorly. Under such conditions osmose must operate, two opposite currents resulting—one of the aliment toward the centre, the other of the acid substance toward the surface of the cell. But under our hypothesis this absorbed aliment is converted into protoplasm and acid. The acid is thus constantly renewed interiorly. But the exterior fluid is in constant motion, and as fast as it loses its active properties by cellular absorption it is replaced by fresh, active fluid. Thus we see a possible arrangement of conditions for a constant action of osmose, and incessant production of protoplasm.

If, by removal of pabulum, this action of osmose ceases, the substance of the cell gathers into a spherical mass round its centre, the action of solidification, or stiffening, involves more and more of the protoplasm, and the activity of the cell is eventually lost. If, on the contrary, the pabulum be in excess, the protoplasm rapidly increases, division of the cell takes place, and new centres of action result. This process of division may possibly result from the vertical mode of motion which we supposed to be peculiar to the animal cell. The osmotic action which we have just described is a true vortex, there being a constant flow of matter inward toward, and a second constant flow outward from, the centre, these two opposed currents acting from and toward the whole periphery. But when the amount of active protoplasm in the cell has increased to a certain extent, the centre of action may cease to be a point and become a line or an extended space, or two or more points of superior action may appear. The osmose then, instead of being directed to a single point, may act toward two points. Thus, two vortices of motion would be established within the cell, their centres within the active substance, but separated from each other. The tendency of each vortex to form a sphere of the matter in which it operates would produce all the phenomena of division—the furrowing of the wall, the dumb-bell shape, and the gradual contraction of the centre—till the single cell is divided into

two, each of which becomes spherical. Immediately that the two vortices are formed, each may commence to throw up a wall of formed material at its exterior, so that a dividing wall of formed material gathers between the two active centres. Division occurs through this wall; so that when separation occurs, each new cell is already entirely enclosed in a wall of formed material. The cases where two or more nucleoli appear in a single nucleus may be results of this formation of new centres.

It is probable that, in the young vegetable cell, growth and multiplication proceed under the same law, this cell not being limited to the distinctive spiral mode of motion until it has become forced by its surrounding conditions to act linearly. Osmose may act here as in the animal cell, the activity confined to one extremity, the formed matter occupying the other, and division of cells occurring, as before, by a previous division of centres of osmotic action.

The organic cell, then, under such an hypothesis, may be considered as an especially active centre in a mass of protoplasm, which becomes the centre of a vortex of moving material. The mass growing, as a consequence of its action, new centres of vortical motion arise, each of which constitutes a new cell; and thus, by a continuance of this process, the original cell of the ovum multiplies into the vast aggregation of cells of the perfected animal. This idea will apply equally to the theory that cells arise only from pre-existing cells, or to the opposite view that cells may arise in a homogeneous blastema. For centres of vortical motion may possibly arise in such a blastema, the effect of each of which would be the spherical aggregation of matter and the formation of a cell.

In Darwin's theory of pangenesis, it is supposed that each of these minute organic units has an individual character of its own. From each cell infinitesimal portions or germs constantly pass off, and are disseminated throughout the body, these never developing into cells until they return into t. eir

native conditions. In the ovum countless numbers of these germs aggregate from the parent bodies, and become developed into cells of organs which display the individual characteristics of the parent organs. By this theory he accounts for the facts of hereditary transmission. He supposes that such germs, from one or the other parent, may pass through many generations undeveloped, and when at last development occurs, the characteristics of the originating organs or persons may appear in a remote descendant.

ART. VIII.—1. *Speeches by Minor Politicians in Congress and Elsewhere.* 1866-1870.

2. *Sermons, by Political Ministers of the Gospel.* New York, Boston, and Philadelphia. 1866-1870.

3. *Daily Articles in the Newspaper Organs of Republicans, Democrats, Radicals, Etc., passim.*

To most persons it seems a harmless thing for politicians contending for office to abuse each other; and the opinion is equally general that those who succeed in attaining office can hardly be abused too much. But by no other means is more mischief done in a republic than by this partisan defamation. Were the history of all the great republics of the world, now passed away, carefully examined, it would be found that nothing contributed more to their fall than the demoralization thus produced.

If such scurrility as we are in the habit of hearing and seeing daily, during election times, is not invariably pernicious, it is certain that it rarely, if ever, does good. The only excuse those who practise it most can make for it is, that it deters men of bad character from becoming candidates for office by warning them that if they do their iniquities will be exposed

he world. But that it has no such effect in one case out
;wenty might easily be proved. Unhappily we have but
much data to show that it is those who have proved them
es most unscrupulous and most devoid of principle, that
e least diffidence in soliciting the suffrages of their fellow-
;ens. Nor is the fact strange. Is it not, on the contrary,
t we should expect ?

Those who are prevented by the fear of abuse from coming
ard as candidates for office, are, in nineteen cases out of
ıty, men who have led a blameless life. We do not mean
all of this class are so deterred. A republic were but a
kery were upright and honorable men not willing to serve
ı spite of all the obloquy their services—even when most
fully rendered—might entail on them.

t would be idle to think that our own republic could have
ned the greatness, power, and influence it possesses to-day
it not been served by men possessed of integrity, as well
›ility; nay, ha l not the majority of its principal function-
ı been of this character—had they not, at least, been very
rent men from what nearly all have been represented by
opponents—instead of having become the colossal power
, it would ere this have either passed out of existence
;ether, or been broken up into a half dozen fragments.

f no good, but much evil, arises from partisan abuse before
;andidates are elected, what can be said of its influence on
ıame men after they have been elected? Perhaps a still
› important question is, What is its influence on the public
rge? Before we attempt to answer either, let us see what
ıe ostensible object of those who practise it. The best
anation they can give—indeed the only explanation—is,
they attack office-holders either to deter them from doing
g, or to force them to do good.

But who will believe that, in one case or the other, the
ıs are adapted to the end? Are public functionaries to be
tened like children, by calling them hard names? Is it
y that they will take advice more readily on being called

knaves, scoundrels, robbers, or liars, or all together, than on being addressed in the language of civility and moderation? No one would maintain for a moment, on reflection, so absurd a proposition. Even in despotisms men revolt against being forced by abuse; history shows us how often they prefer the dungeon or even the gibbet. Cruel and unscrupulous as Nero was, if he wanted to be strictly obeyed by his own functionaries in anything he set his heart upon, he generally found it advisable at least to make his wishes known to them in a civil manner. It was precisely because he did not always pursue this course—because he became more and more insolent and overbearing as he attained more experience in the exercise of despotic power—that finally his outraged subjects struck him down.

That any man should be subjected to habitual abuse on account of his political opinions is sufficiently absurd; but that all entertaining the same or similar opinions, and happening to be in office, should be subjected to similar treatment, would seeem incredible, were it not attested in a hundred forms. Nor is the habit confined to any party; in this respect at least, republicans and democrats are alike. It need hardly be said that the men of education and culture of both parties, that is, those who have learned to think, form exceptions to the rule. These may be enthusiastic republicans, or enthusiastic democrats, and yet be willing to believe that those who differ with them may be honest men, or that, if they are not honest, it is not on account of that difference.

But, unfortunately, there are too few of this class—so few that they can hardly be said to affect the general rule—and hence it is that all the great writers on the science of government, from Aristotle to De Tocqueville, have maintained that in no form of government is thorough education more essential to the well-being and preservation of the state than in a democracy.* It is but natural that men who are not educated

* "But of all things hitherto mentioned, that which *contributes most to preserve the state* (in a democracy) is, *to educate the children*," etc.—Aristotle's *Politics*, book v, chap. ix.

"C'est dans le gouvernement républicain que l'on a besoin de toute la puissance de l'education."—Montesquieu's *De L'Esprit des Lois*, liv. iv, chap. v.

should deny this, and say that as the system of government is simple and easy in a republic so should the system of education. According to this numerous class there should be no such abstruse studies as require much time and labor; above all things there should be as little Greek and Latin in republics as possible, for if these are not the dialects of Satan, as they were regarded by some of our pious ancestors, we are told that, at least, they are dangerous things which every honest and thrifty citizen should set his face against!*

It is because opinions like these are entertained by nine-tenths of our public men and men of wealth of all parties, that the mutual partisan defamation we complain of is so nearly universal in its character. Under the most favorable circumstances there is a stronger tendency to accusations and recriminations in a democracy than in any other form of government.† No amount of knowledge or public virtue would entirely set aside that tendency. This we see fully illustrated in Athens in the time of Pericles. It is admitted by all historians who have treated the subject, that no man combined more virtues with a thorough philosophical education than Pericles; yet there are few errors or even crimes attributed to public men by their political opponents of which he was not accused. He was accused of devoting the public treasure to his own private purposes. Those magnificent structures which are the glory of Athens, even in their ruins, were a constant source of chagrin to him, not only during their construction,

* "It is important that those who, by their nature or their fortune, are destined to cultivate, or prepared to relish them, should find schools where *a complete knowledge of ancient literature* may be acquired, and where the true scholar may be formed. A few excellent universities would do more towards the attainment of this object than a multitude of *bad grammar schools*, where superfluous matters, badly learned, stand in the way of sound instruction or necessary studies. All who aspire to literary excellence in democratic nations ought frequently to refresh themselves at the springs of ancient literature. *There is no more wholesome medicine for the mind.*"—De Tocqueville's *Democracy in America*, vol ii, chap. xv, p 76.

† As the rulers of democratic nations are *almost always* suspected of dishonorable conduct, they in some measure lend the *authority of the government to the base practices of which* they are accused."—*Ibid*, vol. i, p. 267.

but as long as he lived; for he was persistently charged with expending on those buildings ten times the amount of money that was necessary. Although he employed the most renowned architects and sculptors—including Phidias, Callicrates and Ichinus—he was accused of having been guided only by his political or personal preferences; in a word, he was charged with "getting up jobs" much more for his own benefit and that of his adherents than for the public benefit. It was in vain that great and good man urged that, much treasure as those various edifices cost, they were worth vastly more.* How true this was all posterity has borne emphatic testimony; but it did not save Pericles from the humiliation of being put on trial on the charge of squandering the public money, although even his opponents were obliged to acquit him and bear testimony to his innocence.

It is well for us to remember that, while it is true that Pericles was more honored than ever after this, if such was possible, the spirit of defamation which produced it was rapidly corrupting the Athenian republic and hastening its fall; it should also be remembered that those who were chiefly instrumental in those systematic efforts made for the disgrace of Pericles, found their own turn another time; nor did they fare so well, when it came, as Pericles did. This is true, for example, of Cimon, his worst enemy, who was expelled from the city by the ostracism, as dangerous to the republic from his intrigues, and from the influence which he was known to exercise over a large class of the citizens.

But let us avail ourselves of one other lesson before leaving Athens and returning to our own country; let us bear in mind that when the public corruption, produced by indiscriminate abuse of the public functionaries, attains its climax, or rather its lowest depth, it is not the bad men, but the best men, those

* "When he asked the people 'Whether they thought he had expended too much?' they answered in the affirmative: but when he remarked, 'Then be it charged to my account, not yours; only let the new edifices be inscribed with my name, not that of the people of Athens,' they cried out that he might spend as much as he pleased of the public treasures without sparing them in the least."—Plutarch *in vita*.

who have deserved most from their country, that are most likely to suffer. In illustration of this we need only mention three names —Themistocles, Alcibiades, and Aristides, each of whom was ostracised by the degenerate Athenians.

There is nothing a people are more unwilling to admit than their degeneracy, nor is their anything more difficult for them to recognise, especially when it is produced by corrupting influences, which, though fatally efficient, are more or less slow in their operation. But, assuming for a moment that this mutual defamation on the part of our political parties has not a tendency to corrupt the public mind in general, it requires but little reflection to see that, altogether independently of such corruption, it is highly injurious to us as a nation.

It were easy to illustrate this, but a remark or two will be sufficient for our present purpose. Thus, for example, to commence with our National Government—without showing the least favor to one party or the other—so much have General Grant, and almost every member of his cabinet, been abused by partisan politicians in Congress, in our state legislatures, and in the newspapers, that foreign governments hesitate as to whether the most important recommendations of the President of the United States, in his Message to Congress, should receive any attention. Thus, while we write, the Atlantic telegraph brings us word that those "recommendations" are regarded throughout Europe as "still-born," the London Times declaring, in an elaborate editorial, that the recent message, and the documents which accompany it, "mark another stage of the president's *downward career*, and show how far the highest authorities will go when the balance of parties is unstable."

This is comparatively mild in expression, but it means much more than the language would imply to most readers, for no doubt it is semi-official and consequently diplomatic. Were it not for the views on which it is based, the Alabama claims would have been settled long since. England is quite aware of the immense power of this country, but she believes

that we are so much divided by party strife that we could never agree on any such important step as enforcing our claims against so formidable a power as she. This feeling is no secret; it is constantly finding expression in one form or other in the leading journals of the kingdom. Nor can we blame England for it; we should rather blame our politicians and their organs, since it is they who furnish her the data from which she deduces her conclusions.

Nay, the truth is that had England regarded the North as really united against the South at the commencement of the rebellion, she would not have been so ready to accord belligerent rights to the rebels, and then there would have been no room for the Alabama claims or any such. But what wonder is it that she believed there would be no serious, persistent resistance to the secession of the South, since it was loudly declared by leading republican as well as democratic organs in the North that we had no right to detain the Southerners if they wished to separate from us?

Our readers may remember that this was the cause of much strife, not only between the democratic and the republican organs, but between the latter among themselves. It is not strange that this strife deceived England; she afterwards acknowledged the fact, but it was then too late; the mischief was already done. There is no reason why we should not admit that, when she found that after all the North was really in earnest—fully determined to force the South back—she modified her course very much in regard to the latter. Had it not been for this change in her conduct, war between this country and England would have been inevitable. This would have been a calamity to both nations; but in the embarrassing circumstances in which we were placed at the time, especially in regard to our navy, while the navy of England was all-powerful, it would have been a much greater calamity to us than to her, even if it had failed to enable the South to dismember the republic. That we had a narrow escape from being plunged into a war with England is generally admitted

all our thinking, dispassionate men, and the same class are ıally unanimous in the opinion that, whatever trouble we l with England—whatever injury she did us by awarding igerent rights to the rebels and furnishing them with muons of war—and it was no trifling injury—it was undoubtr brought upon us by the violent and unscrupulous partiship of our politicians and their organs.

But still more fierce and violent did this partisan strife ome after the rebellion was over, until it culminated in impeachment of the President. All remember the deable scenes that led to this event, and that characterthe proceedings from day to day to their close. At ıe those scenes seemed little more than ordinary; so iliar had the gravest accusations and the grossest abuse he highest functionaries of government become to our ple. Throughout Europe it was different. In Gerıy and France, as well as in England, it was believed that had fallen into a state of complete anarchy; those of our lers who happened to be in Europe at the time may well ember that it was generally concluded that the distion of the republic, which the Southerners had proved ble to accomplish, with all their heroism and resolution, by e of arms, was now in a fair way of being accomplished strife.

There were European statesmen, historians, and philosors, who—although they never lost faith in the ability of North to maintain the Union in its integrity, even when prospects seemed most gloomy—now shook their heads, ıe of the demoralization produced by war, and declared the house so divided against itself must fall. That our lit fell very much none can forget. During the impeacht trial our bonds became almost a drug in every capital in ›pe.

›ne leading European journal asks, "What stability can ›xpected in a country where candidates for office are ed to the skies as combining all the moral virtues; and

where the same men, when in office, are denounced by very people who had so triumphantly elected them, as vilest scoundrels?" Another scornfully remarks: "Such republicanism! Let us hope that such disgraceful scenes they do not cause the early downfall of the 'model Republ will at least render our demagogues at home more harmles A third asks, "What sort of a person must this Johnson ha been before he was elected? Can it be true that he or belonged to a band of robbers who infested the woods Tennessee? How strange that a people who claim to poss such superior intelligence would elect such a man! But seems that every member of this Johnson's cabinet is as gre a reprobate as himself!" A fourth, in discussing the sa subject, wants to know, "Can these be the same men th belonged to the cabinet of Lincoln during the war? At les the names are the same—Seward, McCulloch, Welles, et But if they were so faithful and reliable during the war, ho can they have become so base all at once, after peace h been restored?"

It is not alone in England criticisms and predictions lik these were made. The leading journals of Germany, Franc and Italy were equally free in the expression of their a tonishment, their forebodings, their pity, their scorn, th regret, or their exultation, according as they were friend unfriendly, or indifferent to republicanism. Even the Ru sians, whom, strangely enough, so large a proportion of o people regard as our best friends, had their gibe, their sne and their prophecy at our expense. We well remember rea ing in the "Journal de St. Petersburg," the chief organ of t Russian government, the following words: "If we are to l lieve their organs, the people of the United States distingu themselves above all other peoples that make any pretens to civilization, by placing their basest and worst men at t head of their government!"

In this hasty glance we have given but a faint idea of t injury inflicted on our material interests as well as on o

reputation as a nation, by violent and unscrupulous party strife. Now, if we inquire what is the effect of the same system on our state and municipal governments, we shall find that it is scarcely less injurious to us at home or abroad.

Because neither the power nor the emoluments possessed by the functionaries of our state governments are such as to excite so much envy or jealousy as those possessed by the chief functionaries of the national government, the former enjoy comparative immunity from accusation and abuse. Accordingly, the remark has often been made abroad, that our state officers must be tolerably respectable men, and those not sufficiently acquainted with the facts wonder why we are so short-sighted as to choose more honest or abler men for our state governments than for the national government. Thus, for example, Mr. Hoffman, the governor of the state of New York, is but little and seldom abused as such; indeed he is scarcely abused at all, except when he refuses to pardon some malefactor, who evidently deserves the punishment awarded to him by the courts, or when he does pardon one whose guilt is not so obvious. But let him be made President, or even secretary of state, or secretary of the treasury, and see how many grave faults he will be soon found to have! nay, let him only become a candidate for any of these offices, especially for the highest of them, and he is no longer that tolerably honest, respectable functionary which even his opponents acknowledge him to be, while he is merely "His Excellency the Governor" and stays at Albany.*

In most of our municipal governments similar causes produce similar results. It need hardly be said that in proportion as cities are large and wealthy their chief public offices are coveted; and in proportion as they are coveted will those who occupy them excite jealousy. The theory, that because one city is so far orderly as to attract no particular attention to its government, another city of about equal size and belong-

* "Those who are themselves unhonored, while they see others honored, *will be ready for any disturbance.*"—Aristotle's *Politics*, b. v, chap. iii.

ing to the same country should be the same, has always been found erroneous when put to the test. Cities inhabited by exactly the same race often require plans of government entirely different from each other, although all may be republican. This was as forcibly illustrated in Italy during the republics of the middle ages as it was in Greece during the time of Pericles. No three cities were more unlike in their government than Venice, Florence, and Genoa. Each exhibited great crimes as well as great virtues, in proportion as it was great and flourishing itself. Genoa being the smallest and least important of the three cities, always boasted how superior it was in its morality to either, especially to Venice, which had no rival in the world at this time in enterprise, wealth, and power. Upon the other hand, Florence admitted that it had more criminals in its prisons than Genoa, but boasted that it had fifty per cent. fewer than Venice, and added, that if all the Venitians who deserved to be in prison had been put there, the difference in her favor would have been more than a hundred per cent. At the same time all the smaller cities thanked God that they were not such a wicked and depraved people as either the Venitians, the Florentines, or the Genoese![o]

Now, in comparing New York to other American cities, it is necessary to bear in mind, not only all this, but a good deal more. In order that such a comparison can have any claim to fairness, New York must be regarded not only as the largest and most wealthy city in the United States, but also as the most heterogeneous in its population, and there is no respectable writer on the science of government who does not admit that this mixture of nationalities presents great difficulties to the government, even when each ingredient possesses a certain amount of intelligence.

It is true that in other cities also there is an ethnological mixture; this is true of Boston and Philadelphia, but not to one-twentieth the extent, in either case, to which

[o] Sismondi's *Hist. des Républiques italiennes*, tome ii, p. 58 *et seq.*

it is true of New York. Thus, then, nearly if not all the causes which render a community difficult to be governed are in full operation in our commercial metropolis. The difference between it and Boston, as to the difficulty of governing it, is nearly as great as that between the armies of Hanibal, which were composed of a dozen nationalities, and the armies of Marcellus, the two-thirds of which, at least, were Italians; the remaining one-third consisting of Gauls and Germans. Then in the armies of Hanibal all the nationalities were on an equal footing, the individual members being equally entitled to promotion, according as they distinguished themselves, whereas the Gauls and Germans in the armies of Marcellus were, in general, treated as aliens; as aliens they were kept under severe restrictions, and were but rarely promoted, scarcely ever to any higher rank than that of a petty officer, corresponding with the corporal or the sergeant of the present day.

Now, it is easy to understand that the armies of Marcellus were much more orderly, and committed fewer excesses than the armies of Hanibal; and if we suppose New York to represent the latter, and Boston the former, we shall be the better able to estimate the superior morality claimed by Boston at its proper value, especially if we take into account, as we should, that Boston has the additional advantage—a greater advantage than any other—of possessing more general intelligence than New York. It follows, then, that a set of men who might govern Boston quite creditably might bring much discredit on themselves did they receive an opportunity of attempting to govern New York. We can assure them that before very long they, too, would be called "the ring." After a probation of a few months each would receive a name deemed more or less appropriate, according as he made himself more or less prominent at the City Hall or elsewhere; one might expect to be decorated with the title of robber, another with that of plunderer, another with that of ignoramus, another with that of traitor, another with that of rebel, etc., etc.

Most probably the first attack would be made on the indi-

vidual having charge of the public treasure. If so he could hardly do anything more straightforward or manly than to request those having the most treasure themselves, and the most unsullied reputation for honesty, without regard to their politics, to examine his coffers and his accounts; but should they even exonerate him to the fullest extent,* he might not hope that his accusers would remain altogether silent.

The next in order would probably be the one having charge of the public works, because, being entrusted with the outlay of so much money, and having the privilege of employing so large a number of voters at the public expense, it clearly follows that he must be guilty of fraudulent and corrupt practices! especially if he be rich and public-spirited enough to advance sufficient money out of his private purse to secure us a sufficient supply of pure Croton against all contingencies. At best, he must not expect anything better for his pains than jeers and jibes!

We think we hear our Boston friends say, "But our Judiciary—that, at least, would remain immaculate, even in New York." Now, we have a high opinion of the judiciary of Boston; we make no accusation whatever against it; nor have we ever done so; but we are convinced that if the two cities exchanged their judges to-morrow, assuming they could do so, in a short time our Boston judges would have as bad a name as ever our own judges had, and we are equally convinced that the most intelligent of the Bostonians, too, would soon begin to say to each other, "It is evident, after all, that those New York judges were wronged. We have had them now for so long, and there has hardly been an instance in which they can be said to have discharged their functions otherwise than in an impartial and honest manner." There might be a few exceptions; for, indeed, there are some of our judges whom we could not reccommend to the most benighted village

* "We have come to the conclusion," say Messrs. Moses Taylor, E D[illegible], Brown, John Jacob Astor, George K. Sistere, etc., "and certify that the financial affairs of the city, under the charge of the Comptroller, are administered in a correct and faithful manner." *Report*, dated Nov. 1, 187[illegible]0.

in our western country; but these do not belong to our higher courts,* and it is not fair that the latter should be held responsible for their conduct.

That all branches of our government—national, state and municipal—should be freely criticised, far be it from us to deny. It will be admitted that none have criticised each more fully and more fearlessly than we have ourselves; but we have never criticised any one, no matter what office, high or low, he held—on account of his political opinions. However, it is not against criticism that we speak. If all the republican politicians in the country, or all the democratic politicians be criticised, and even criticised as such, we have no fault to find, for the very term presupposes reason and justice. What we object to is abuse—indiscriminate defamatory abuse of any set of men whatever—merely because they do not belong to our party, because they differ with us in opinion, and because they either possess, or seek power which we prefer to see in the hands of our own party. If it be replied that nothing more than legitimate criticism is intended, then the question arises, is it legitimate criticism to call a man a liar, a knave, a traitor, or a ruffian? Or is it abuse?† Whether is he, who does so, a satirist or a scold?—a Juvenal or a Mrs. Jenkins?

If the effect were confined to the individuals abused and vilified, we should give ourselves no trouble about it, but we have already shown that the practice exposes us to derision and contempt abroad, and exercises a demoralizing influence on our people of all parties at home.‡ There is no American who

* "I am inclined to believe this practice of the American courts [uniting the trial of the law with the trial of the individual] to be at once most favorable to liberty *and to public order*."—De Tocqueville's *Democracy in America*, vol i, p. 129.

† "Intending to correct the licentiousness of the press, and to *restore the use of orderly language*, you first try the offender by a jury; but if the jury acquits him, the opinion which was that of a single individual becomes the opinion of the whole country."—*Ibid*, vol. i, p. 231.

‡ "Le principe de la démocratie se corrompt, non-seulement lorsqu'on perd l'esprit d'égalite, mais encore quand on prend *l'esprit d'égalité extrême*, et que chacun veut être *égal à ceux qu'il choisit pour lui commander*. Pour

has travelled to any extent in Europe, who has not been informed, in one form or another, that there is no such thing as justice to be expected in the United States, that American law is but a mockery, and that how could it be otherwise, since our highest functionaries are bent only on plundering all they can as long as they are in office; while the judges of our highest courts fraternize with the commonest and basest malefactors, and aid them in evading the just punishment of their crimes. If this is, as it should be, indignantly denied, one partisan American journal after another is exhibited in proof of all; and if this is not sufficient, our partisan religious journals are brought in to settle the dispute. We may remark, in passing, that this serves to explain how it is that our partisan journals, both republican and democratic, are in high favor with all European statesmen and politicians, who are avowedly hostile to republican institutions, whereas even those Americans who recognise them as their organs and quote them as authorities when at home, thrust them aside in their travels on account of the use thus made of them. The same practice is undoubtedly one of the reasons why fifty travelling Americans have the Herald with them wherever they go for one who has any of the partisan journals, whether religious or irreligious, while those hostile to republican institutions are rather diposed to run it down.

That politicians will have organs, we are aware; they could hardly exist without them at the present day; and there are some of the organs which perhaps would find it difficult to exist without the politicians. By all means, then, let both continue to live, but let them improve their manners; let them advise each other, at least to use some discrimination and pay some

lers le peuple, ne pouvant souffrir le pouvoir même qu'il confie, *veut tout faire* par lui-même, *délibérer pour le sénat, exécuter pour les magistrats, et dépouiller tous les juges.*

"Il ne peut plus y avoir de vertu dans la république. Le peuple veut faire *les fonctions des magistrats: on ne les respecte donc plus.*"—Montesquieu's *De L'Esprit des Lois*, liv viii, chap. ii.

tention to decency in their attacks on their opponents.* oth should remember that one may be a republican, or a mocrat, as the case may be, and an office-holder withal, id yet be neither a plunderer, an embezzler, a traitor, a vil-in, or a liar. They should remember that of all kinds of ar-ument abuse is the worst—the least convincing, as well as e most vulgar and most demoralizing. Besides it really akes its object feel less than the language of moderation and cency, for what the poet means when he tells us that the zor never cuts so keenly as when dipped in oil is strictly ue; it is also true that this oil may become vitriol in its rrosive effect, whereas such arguments as "traitor," "vil-in," "liar," etc., seldom fail to recoil with a vengeance on ose who use them.

Every intelligent person who has learned to think for him-lf will agree with us that the proper course for our politicians nd their organs to pursue is something like this: If the resident of the United States is believed to have done wrong, t him be criticised freely; but in the language of decency nd with some regard for the high office he holds; let him not e treated as if he were only the president of the "Butcher's rotective Association." There is no need that all his cabinet hould be criticised at the same time that he is. Still less is it equired that all the officials he has appointed during the last ix months should be condemned individually or collectively. f the secretary of the treasury is ignorant of political economy, t his ignorance be pointed out by all means; if his grammar e defective, let him be corrected in that also, but without aking any onslaught on the secretary of state, the secretary f war, and the secretary of the navy. Nay, if the secre-ry of the treasury improves in his political economy, or in is grammar, or in both, after having been so criticised, there no good reason why the fact should not be acknowledged,

* "L'incivilité n'est pas un vice de l'âme; elle est *l'effet de plusieurs es*, de *la sotte vanité, de l'ignorance de ses devoirs*, de la *paresse*, de la *stu-idité*, de la distraction, du mépris des autres, de la jalousie."—La Bruyère's *Homme*, chap. xi, liv. iv, c. v.

at least tacitly, by the critic; and, it might be added, although the remark would be likely to displease both, that if the secretary's ideas be still rather crude, those of the assistant treasurer are enlightened and sound.

If it be said that some of the functionaries in the civil service of the United States in New York are sadly incompetent for their positions, let it be admitted that the heads of our different military and naval bureaux, especially the former, are, on the contrary, highly competent and as honest and trustworthy as they are competent; and the fact—for such it really is—will show that if the President is but an indifferent judge of the capacities and characters of politicians, he is rarely mistaken as to the merits of the gentlemen of the sword.

Upon the other hand, if the republicans think that the head or foot of any of our commissions in New York has done wrong, let them criticise him to their heart's content; but there is no need that they should attack all other commissioners belonging to the same party. This rather weakens the force of the castigation inflicted on the actual transgressor. If a leading member of any of the different boards be a "villain" because he has not pleased somebody, or because, if you will, he has deserved the title, that is no reason why all other members should be villains; still less is it a reason why Mayor Hall should be called a villain, especially as there are few men of any party more free from grave faults. If somebody in the Board of Public Works has committed a mortal sin by furnishing an undue supply of Croton, and thereby, perhaps, increasing the number of suicides, surely his sin ought not to extend to the democrats of the Board of Health or of the Police Board, each of whom, we believe, are regarded by our citizens in general as rather good sort of men.

In short, this idea of "the ring" is puerile. The cabinet of every nation in the world may be called a ring, if the term means that the members of the cabinet have formed certain resolutions in common, and that what is recommended by the Premier or head of the cabinet will receive the support of the

rest of the members in preference to anything recommended from the outside. Be this as it may, we have, ourselves, criticised several members of the ring in turn, from time to time, according as we thought they deserved it; such for example, as the late democratic president of the Croton Board, the late street commissioner, and one or two other functionaries, who notoriously neglected their duties.

Nor shall we shrink from pursuing the same course in the future. We have our eye at this moment on certain "members" whose chief qualifications for high official position are impudence, pretension, and arrogance; members who, while they assume the airs of statesmen and lawgivers, know about as much of the science of government, the science of law, or any other science—save that of making money, and thrusting their friends where they can make it also—as the famous "Colonel" Fisk, Jr., knows about military science. But the individuals alluded to are possessed of a certain cunning, and display a *quasi* liberality, which secure them comparative immunity from attack when they deserve it most, while their more frank and straightforward colleagues receive most abuse when they discharge their duties most faithfully.

Thus let the individuals of all parties be treated as they deserve. The Christian dispensation does not require that the sins of the children be visited on the fathers. All our parties are in reality no worse than the parties of other countries; indeed, upon the whole, they are quite as good if not better. But their violent abuse of each other makes them seem much worse to the world as well as to themselves.* Besides the consequences already mentioned, many others, equally deplorable, result from this excessive, violent strife. It is on account of it that our greatest statesmen, whether republican, whig, or democratic, could never hope to attain

* "And this in general ought not to be forgotten, that whosoever has been the real occasion of a state being comfortable or powerful, whether private persons or magistrates, a tribe or any part of the citizens or the multitude, be they who they will, they become a cause of dispute in the state."—Aristotle's *Politics*, b. v, c. iv.

more than a subordinate position in the national government. Neither Clay, nor Webster, nor Cass found it possible to become President; and we believe that neither Sumner nor Seymour could be elected to-day, because they are too much above the common herd of politicians both in culture and intellectual ability.

In conclusion we will mention one other result, which perhaps all our readers have not traced to the same source, *i.e.*, the political freaks of the ladies during the last decade. A great many still continue to blame the ladies for unsexing themselves, but as we have demonstrated on former occasions in this journal,* they are not half as much to blame as their male friends the politicians, scribes, pharisees, etc. It is but justice to the sex to admit that women are much more truthful than men; they have also more faith in what they hear. Then they see and hear it represented in language far too plain to be misunderstood, that all our male functionaries are villains, embezzlers, liars, plunderers, etc., etc.

Is it any wonder therefore that the women think that the only hope of salvation for the country is, that they leave the domestic affairs—including the cooking and baby nursing—to the men, and undertake, first to purify the corrupt ballot-box, which invests with authority so many vicious bad men, and then see that at least a respectable portion of the public offices are occupied by their own more scrupulous, more faithful, and less quarrelsome sex!

* Vide N. Q. R. No. XXXIX., Art. "Woman's Rights Viewed Physiologically and Historically."

NOTICES AND CRITICISMS.

EDUCATION.

Grammatical Analysis, with Progressive Exercises. By WALTER SCOTT DALGLEISH, M.A., Edinburgh, Vice-Principal of Dreghorn College; Author of "*English Composition in Prose and Verse.*" With Preface to American Edition. By Prof. A. H. DUNDON, *Professor of History and Political Economy in New York Evening High School, and Principal of Grammar School No. 4, Jersey City.* 16mo., pp. 66. New York: Charles Scribner & Co. 1870.

WE give the title and its adjuncts in full, in order that the reader may be in a proper frame of mind, at the outset, to appreciate the boon presented to the educators and rising generation of America. Let it first be remarked, that the original author belongs, or did belong at some time, to Edinburg; that he has the letters "A.M." affixed to his name; that he is supposed to be, or was, "Vice-Principal of Dreghorn College." To be all this without being an unrivalled grammarian were perhaps impossible, although there are not many five miles distant from the institution that have ever heard of "Dreghorn College," or that can tell how much better, or worse, it is than five hundred of our own self-styled colleges.

Be this as it may, our Scottish friends often laugh at some of our publishers for their skill in finding mares' nests exactly of this kind; for that shrewd people understand perfectly that one may be a "vice-principal," or professor, even, of one of their universities or colleges, recognised as such, and yet possess but a very slender stock of knowledge. Doubtless, most of our readers remember Burns' description of the election of the "Dean of the Faculty," the individual supposed to be the chief pundit of the university; but as there may be some who forget it, we will extract a *morceau* or two. First we receive an inkling of the great excitement caused by the approaching event:

> "But Scot with Scott ne'er met so hot,
> Or were more in fury seen, Sir,
> Than 'twixt Hal and Bob for the famous job—
> Who should be Faculty's Dean, Sir."

This is followed by descriptions of the qualifications of the rival candidates. One possessed sufficient to entitle him to the position he sought in any institution, whereas the chief, if not the only, qualification of the other, was that he remembered the tenth commandment.

> "This Hal for genius, wit, and lore,
> Among the first was number'd;
> But pious Bob, 'mid learning's store,
> Commandment ten remember'd.
> Yet simple Bob the victory got,
> And won his heart's desire;
> Which shows that Heaven can boil the pot,
> Though the devil's——in the fire."

The impudent candidate in this case was the one who depended on his learning, but whose piety was not of the orthodox standard.

> "Squire Hal besides had, in this case,
> Pretensions rather brassy,
> For talents to deserve a place
> Are qualifications saucy;
> So their worships of the "Faculty,"
> Quite sick of merit's rudeness,
> Chose one who should owe it all, d'ye see,
> To their gratis, grace, and goodness."

To some it may seem incredible that there were more profou[illegible] scholars and more learned grammarians in Scotland when the abov[illegible] verses were written than there are to day; but such is the fact, never[illegible] theless. By this we do not mean, however, that Scotland has retrogra[illegible] ded in general intelligence, for the same remark applies to the scholar[illegible] ship of England and Ireland. But it was in the palmiest days of th[illegible] Scottish universities that Dr. Johnson uttered his famous sarcasm again[illegible] the University of St. Andrews, that it was "*growing rich by degrees*" that is, by selling its academic honors.

Far be it from us to insinuate that Mr. Dalgleish has not come hon[illegible] estly by his "A.M.;" and yet we confess that his book is by no mean[illegible] such as we should expect from a really educated man, whether he ha[illegible] any degree or not. We will give our reasons for this in a minute o[illegible] or two. In the meantime we will turn to the gentleman to whom America is indebted for the introduction of the work into this country and first we ask the reader to take into consideration all his titles, an[illegible] allow the learning which they imply its proper weight. Let it be born[illegible] in mind, by every teacher and student, that Prof. A. H. Dundon is not onl[illegible] professor of various branches in the New York Evening High School, bu[illegible] also principal of "Grammar School No. 4, Jersey City" Those who at[illegible] tend evening schools are supposed to be more easily pleased with "profes[illegible] sors" than those who attend day schools, especially when they hav[illegible] nothing to pay, so that a "vice-principal" in a Jersey day school ma[illegible] rank as high as a "professor of history and political economy" in New York evening school. But let us proceed to the work before us.

Next to the title page is a dedication to "Thomas Hunter, Esq[illegible] Principal of the Evening High School, and of Grammar School No. 8[illegible] city of New York." Who will question the value of "Grammatical Anal[illegible] sis" after this? But the titles just transcribed are followed by a eulog[illegible] which casts the Jenkins style far into the shade; it tells us, in capit[illegible] letters, that "no other educator" "is better *entitled to a people's gratitu*[illegible] for the thousands of *trained minds* he sends forth from his schools" th[illegible] the now immortalized Squire Hunter, who, we are further told, is "t[illegible] student's *true guide*, an *ornament* to his profession, etc." Lest the titl[illegible] of the author of this fine specimen of the lapidary style, given in full

the preceding page, should be forgotten, they are here repeated *in extenso*, after his name.

Next we come to "Preface to American Edition." This, we know, will be read with "bated breath." The first paragraph runs thus:

"'The introduction of a text-book, *which has met with considerable favor in another country*, and its *adaptation to American use*, can present but little *to gratify literary ambition*. In *such cases*, there is no room for *originality*, and *innovation beyond a certain extent* would be *out of place*. Nevertheless, a service of this kind *might prove* eminently useful, and this consideration has led to *the present undertaking*."

Now, we maintain that in not one of the sentences in this paragraph does the author express what he intends to express; in not one are the members of the sentence in harmony with each other; not one sentence is either grammatically or logically correct. But let us transcribe a sentence or two more:

"At the *present day*, no argument is needed to prove the importance of Grammatical Analysis as an element of instruction. *Fortunately* there is *complete unanimity* on this point, while *differences of the gravest kind* exist regarding the best method to be pursued."

Well, let us admit that "Grammatical Analysis" is a great thing, but why will not our author analyse his own sentences? If he will not, or can not do so, then we cannot wonder that he tells us "differences of the *gravest kind* exist regarding the best method to be pursued." We confess our feeling is that, if there be any worse "method" than that of the author of this preface, alas, for the poor urchins who may be obliged to study it!

In his last paragraph the editor tells us that "the views here expressed are not personal," whatever that may mean. After a remark or two more of kindred character, we are again presented with the author's full titles, which, with his name, occupy four lines as follows:

"A. H. DUNDON,

"*Professor of History and Political Economy in the New York Evening High School and Principal of Grammar School No. 4, Jersey City.*"

So much for the Introduction. Now for the body of the work. Where there is a fellow-feeling there is generally a family resemblance; however, the English of Mr. Dalgleish is, upon the whole, better than that of Mr. Dundon; but there is very little of it. Will it be believed, that at least four-fifths of the whole book consist of extracts chiefly from the poets. Thus, in the nine pages from 54 to 62, both inclusive, there are only one line and a half that are not extracts; these nine pages constitute one of the "Progressive Exercises" which we are promised in the title page.

Now let us see what sort of instruction does our author give when he essays to give any. His plan is, if we understand it, very much like that of the young lady returning from boarding school, who thought it vulgar to say "puss" or "cat," but must have it "that feline quadruped."

The lucidity of our author's language might be inferred from so the terms which he makes use of for the purpose of making the boy girls perfect grammarians—such as the following: "alternative co nation" (p. 48), "antithetical co-ordination" (p. 49), "apodosis" (p "appositional complement" (p. 15), "restrictive attributive (p. 28), "protasis" (p. 37), etc., etc. But we will subjoin three pa from as many consecutive pages:

"¶Where two or more clauses are subordinate to the same clause, they are distinq by numbers placed *before* the letters (algebraic co-efficients), thus: two clauses s nate to A, are marked $1a^1$, $2a^1$; two or more clauses subordinate to a^1 are mark $2a^2$, $3a^2$, etc., etc."—(p. 26.

"¶ Two or more subordinate clauses having the same kind of subordination to a rior clause, are said to be *co-ordinate with each other*; as $1a_2$ and $2a_2$, in example ercise 9."—(p. 27.)

"Attributive clauses are either (1) *Explanatory* or (2) *Restrictive*. When the a tive clause expresses a universal quality of that which it qualifies, it is termed sim *planatory*."—(p. 28.)

Now the reader may judge for himself whether we do injust author or editor. Is this sort of jargon a suitable vehicle for tea children the principles of the English language? For our own pa know nothing more unsuitable; nay, we know nothing better calcu to frighten even grown persons from the study of grammar altog We do not mean, however, that it is altogether useless, for it has so amused us that we strongly advise the publishers to include it in "Library of Wonders"; and as books, like weeds, generally multi proportion to their worthlessness, we beg leave to suggest to the e the following motto, for his next edition, to be inserted in place of of his titles:

"In prato quondam *rana* conspexit *bovem*,
Et, tacta invidiæ tantæ magnitudinis,
Rugosam inflavit pellem."

Geology: for Teachers, Classes, and Private Students. By SAN TENNEY, A.M., Professor of Natural History in Williams Co Illustrated with 255 Engravings, 12mo., pp. 366. Philadel E. H. Buller & Co. 1871.

THERE are few things we like better than an interesting, instru text book—one capable of expanding as well as enlightening the y ful mind; and such is eminently the character of that now befo After a careful examination - one from which we have derived profit and pleasure—we readily admit that the author indulges i vain-glorious statement when he assures the reader in the preface t first edition that, "the facts have been drawn from the whole doma science."*

* Page 4.

This assurance was given eleven years ago; the work has since passed through several editions; and we are informed in the preface to the present edition that "many new illustrations have been added, and the size of the book considerably increased." Much more than this might justly have been said; but the whole new preface comprises only two brief paragraphs. This, however, does not surprise us; for in nine cases out of ten we find that it is those who promise least in their prefaces that give most in their books, and *vice versa*,—a remark which applies with peculiar force to our compilers of text-books.

In no science has more progress been made during the last twenty years than in Geology; and to no science is the enlightened world more indebted for its marvellous revelations. Even astronomy, which embraces the whole universe, has scarcely made more startling discoveries. When we speak of the Science of the Heavens and the Science of the Earth, there is a contrast in the very terms in favor of the former; and yet it must be admitted, on reflection, that geology has shed more light on its sister sciences, and contributed more to illustrate both sacred and profane history, within the period mentioned, than astronomy. In a word, it has made more curious and important, if not more sublime, additions to the general stock of human knowledge.

To show how this has been done is not the object of Prof. Tenney's book; otherwise he would have required many octavos instead of our slender duodecimo. It is not the various processes by which nature has been interrogated he presents the student, but their results. At the same time the facts are abundantly explained—as fully, indeed, as it would be judicious to explain them in a text-book designed for colleges as well as schools. Yet it does not presuppose a knowledge of any of the subjects of which it treats, although those subjects are quite numerous, for the work takes a wider range than almost any other bearing the same title with which we are acquainted. In illustration of this, we may refer to the many curious and interesting facts which it has drawn from the animal and vegetable kingdom, as well as to its brief but graphic descriptions of all the common minerals, including the metals, precious stones, etc. None, who have devoted any thoughtful attention to geology, need be informed that the knowledge gleaned from these sources is a necessary qualification for those who would intelligently search the rocks for those remains of plants and animals from which such valuable lessons are to be learned.

In no text-book have we found a more excellent classification of the rock formations; for it is at once simple, impressive, and interesting. The rocks are divided into ten systems, each being the work of countless ages—at least two of those immense periods having passed away before man made his appearance on the earth. The first period had passed away before any living thing had existed on our globe; and it is

the opinion of most geologists that this period alone was vastly longe than the four thousand years interpreted to be the Scripture estimate o its whole age. "During the Azoic Age," says Prof. Tenney, "after th first crust of the Earth was formed, the ocean covered the entire, almost the entire globe, and in this ocean, which was probably hot, mo if not all, the Azoic rocks which we are permitted to observe w formed" (p. 145). In a word, more thousands of centuries have pas since this period—since terrestrial life, even of the lowest kind, co menced—than the human mind is capable of conceiving.

But in this department we must not expand our remarks; and y we cannot lay aside "Tenney's Geology" without inviting the attenti of the general reader—altogether apart from schools and teachers—t the chapters on "geological changes now going on, and the agencies b which they are produced." This will be found worth studying by save those who are geologists themselves to a greater or less extent; an it is not for the latter class these observations are intended. The wo is illustrated with over two hundred and fifty engravings; it has also t advantage of an etymological and pronouncing glossary, and a copio index.

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1. *An Elementary Grammar of the German Language;* with Exercise Readings, Conversations, Paradigms, and a Vocabulary. By JAM H. WORMAN, A.M. 12mo., pp. 297. New York: A. S. Barnes & C 1870.

2. *A Complete Grammar of the German Language;* with Exercises, et etc. Large 12mo., pp. 591. New York: A. S. Barnes & Co. 187

3. *Berliner Echo. The German Echo; or, Dialogues to teach German Co versation.* With an adequate Vocabulary. Edited, for the use American students, by JAMES H. WORMAN, A.M. 12mo., pp. 203.

4. *Collegiate German Reader*, in Prose and Verse, with Biographic Notices, etc., etc. By JAMES H. WORMAN, A.M., assisted by ALV PUTZKER. 12mo., pp. 380. New York: A. S. Barnes & Co. 187

AMONG the literatures of the present day, that of Germany is one the richest. It is true, that it it is neither so extensive nor so attractive English or French literature; it is not so cosmopolitan as either, an therefore, does not exercise so much influence on European civilizatio notwithstanding the superior, profound learning—especially in compar tive philology—which it embodies; but none will deny that it is su ficiently important to render it worth the student's while to study i language.

This is no new proposition of ours; nor is it in the least influenc by the triumph of the Germans during the war which, unhappily, is sti

raging. Had the Germans been overpowered, and their chief towns and strongholds been captured now, as they formerly were, we should have urged the study of their language and literature just as earnestly and as confidently as we do while the fortune of war seems to favor them so much. We should have thought of them in their adversity as we now do of the French, who, though not only their fair capital, but all their other important cities, were captured to-morrow, would nevertheless soon recover their prestige as a highly cultivated, ingenious, and enlightened nation—a nation whose literature would always be a source of instruction and entertainment, even to their enemies.

Of all the principal languages of Europe the German is the most difficult to learn; that it is by no means a euphonious language is admitted by the most popular German writers, as well as by the most eminent German critics; while it is generally agreed among foreigners that it has more hissing, guttural sounds than almost any other cultivated dialect.

Those who undertake to learn it experience great difficulties from its declensions and genders. This will not seem strange when it is remembered that the most learned German grammarians differ with each other on these points. Some maintain that it has *eight* declensions; others that it has but *six*. One class reduce the number to *five*, another to *four*; while yet another claim that there are but *two!* Otto, acting somewhat on the principle of "splitting the difference," holds that, while two declensions may do very well for Germans, foreigners require *five*. The author of the grammars before us thinks the latter number one too many; accordingly he has *four* declensions, just half as many as Adelung, and twice as many as Woodberry and a number of others.*

The gender is another serious obstacle to foreigners; it is sufficiently puzzling even to natives; for no other cultivated language has a gender so replete with inconsistencies. In order that those of our readers unacquainted with German may understand this, we will give a few examples: the German equivalent for *masculine* is "mänliche" (*man-like*), for *feminine*, "weibliche" (*woman-like*,) for *neuter*, "sachliche" (*thing-like*); yet *das weib* (the woman) is neuter; *das Madchen* (the maid, or maiden) is neuter; *das Frauenzimmer* (the female person) is neuter. Upon the other hand, *die Sonne* (the sun) is feminine, *der Mond* (the moon) masculine; *die Eiche* (the oak) feminine; *der Flieder* (the lilac) masculine; *die Kartoffel* (the potato) feminine. Again, *die Donau* (the Danube) is feminine, *der Rhein* (the Rhine) masculine, *die Elbe* (the Elba) feminine, *der la Plata* (the La Plata) masculine, *die Spree* (the Spree) feminine, *der Ohio* (the Ohio) masculine, etc., etc. Thus, then, woman or maid is "*thing*-like" in German, as each is neuter; the potato and the oak are "*woman*-like," since they are both feminine; the moon is "*man*-like," and the sun "*woman*-like," the former being masculine and the latter feminine.

* See *Woman's Complete German Grammar*, p. 40

We might multiply similar examples in each gender, but these suffice. None, we trust, will suppose that our object in pointing out such inconsistencies is to discourage the study of the language; were we even disposed we need give ourselves no trouble on that point. Unfortunately the language is but too discouraging in itself; hence it is that it has made so little progress among foreigners. This has been somewhat curiously illustrated during the Austrian domination in Italy. The efforts made by the imperial government to create a taste for the German language among the higher classes of the Italians might well seem incredible were they not attested in a hundred forms by official reports and statistics. German schools and German seminaries were established at great expense in all parts of Lombardy and Venice; but even the children of those Italians holding office under the government could seldom be induced to be regular in their attendance. After the school system had utterly failed, the Grand Duke Maximilian, the late ill-fated Emperor of Mexico, who, on account of his amiable manners, was more popular in Venice than any other Austrian official, hit upon the expedient of introducing female teachers. Accordingly scores of beautiful, highly-educated Tyrolese maidens were sent to Venice for that purpose. For some time there seemed every prospect of success; but at the end of one year it was found that, although some had learned a smattering of German from the pretty Tyrolese, the large majority of the latter had almost discarded the language they had come to teach and disseminate, and adopted that of their pupils, who, in return, not unfrequently adopted their teachers as wives. The latter fact is but one of the many that could be adduced to show that it is not against the German people the prejudice exists, but against their language.

The German is undoutedly not so refined or elegant a language as any of the other principal dialects of Europe, not excepting the English; each of the latter owes a great deal to the Latin and the Greek, while the former owes very little to either. The German is more monosyllabic than any other European language having an extensive literature; and in proportion as a language is monosyllabic it is wanting in dignity, because even the most uncommon monosyllabes are apt to get into the mouths of the common people.

We are quite aware that in no book will the reader find longer words or more long words than in a German book, but if these seeming polysyllables be examined, it will be found, in nine cases out of ten, that they consist of several monosyllables, of entirely different significations, joined together. This is true even of technical terms; nor need we go beyond those used in grammar for an illustration. Thus take the ten German parts of speech and it will be seen that each ends with *wort* (word); article is *geschlechtwort* (sexword); substantive, *hauptwort* (headword); pronoun, *forwort* (forword); numeral, *zahlwort* (numberword)

zeitwort (timeword); preposition, *vorwort* (beforeword), etc., etc. ng to the conjugation of the verb we find that what, in English, we he *auxiliary verb* is in German *hülfszeitwort*, one term in appearance, a reality consisting of *hülfe* (help); *zeit* (time), and *wort* (word). it what we want to show, in the present instance, is that a good an grammar is of much more importance to those desirous of learn- hat language than might be supposed by those acquainted only the English grammar; or with the English in connection with the r or the Latin. In our opinion there is no language in the study ich more depends on the grammar than the German; nor do we speak e subject without the experience—chequered though it has been—of years in our attempts to understand Göthe and Schiller and Schlegel e original. Accordingly we have taken the pains to examine Wor- s grammar pretty carefully. We have found defects in each—per- more than in other grammars to which we have devoted equal tion; but we have also found more merits. Indeed, the whole s now before us pleases us better than any similar series published is country that we have seen.

t is for his system, however, much more than for his grammatical rledge or accuracy, that we commend Mr. Worman. The fundamen- rinciples of grammar being the same in all languages, a few mistakes e here and there, in presenting those principles, are of but little im- ance when the general plan is good; and the plan of Worman is ex- nt. In our opinion it is superior, at least in some important features, llendorff's. The system of the latter is too fragmentary; it requires nuch from both pupil and teacher.

n Ollendorff we have one tense of the verb, or one declension of the , in one page; then several pages often intervene before we find an- r tense or another declension; and here, also, we have but a frag- . One tense or declension is confounded with another, and the gen- are often confounded in a similar manner. The reason assigned for eems plausible at first sight, namely, that tenses, cases, genders, and re introduced, as in conversation, according as needed. But no lan- ge can be taught from books without a gradual development of its iples; as well might a music teacher attempt to teach music with- he gamut, telling his pupils that they must learn the notes accord- as they occur in the songs or tunes on which they are required to tise.

Mr. Worman, recognising this fact, gives a complete exhibition of new form he introduces, whether it be the declensions of the article ne noun, or the tenses and numbers of the verb. Ollendorff's exer- s in the language of the pupil are much too long and too numerous, le the exer- ses in the language sought to be learned or taught are brief and too few. This difficulty is also obviated by Mr. Worman,

who introduces exercises for German conversation and German reading at the very outset, even in his "Elementary Grammar," each exercise in the original being accompanied with a vocabulary. As the pupil is liable to forget some words in the vocabulary of a previous lesson or exercise, two general alphabetical vocabularies are given at the end of the grammar—one German and English, the other English and German. By these various means the study of the language is greatly facilitated, and many things which would be otherwise discouraging, if not absolutely repulsive, are invested with an interest which, in time, becomes a veritable attraction.

These remarks apply with particular force to the "Complete German Grammar"—a title which we cheerfully admit does not at all overestimate the real merits of the work. It is on the plan of "Gaspey's English Conversation Grammar"—a work become quite famous throughout continental Europe. Whether Worman's Grammar proves equally successful or not, we are convinced that in time it will supersede more than one German grammar now pretty extensively used in this country.

"The German Echo" is what its title implies. It is chiefly a reprint of "Wolfram's German Echo"—a book much better known in England than in this country; its object, as the present editor tells us in his preface, being "to furnish the learner with an extensive vocabulary of words and expressions in common use, etc."

Worman's "German Reader" embraces a well selected variety of prose and verse from both the popular and classical writers of Germany. Among the more celebrated pieces given are Gœthe's *Iphigenie* and Schiller's *Jungfrau von Orleans*. On the title page of this volume the reader is informed that it contains "biographical notices, explanatory notes, etc., etc., and an adequate dictionary;" but, on examination, we find none of these things—nothing but the text, except some proverbs at the end translated into English. This is rather an awkward mistake, although the book is marked on the back "Text only," and the publishers announce at the end of the preface that the missing "Notes and Vocabulary" will be found in a separate publication.

We may now remark that our attention has not been called to this series by either Mr. Worman or his publishers, but by several teachers in different parts of the country, some speaking favorably, some unfavorably of the books—especially of the grammars; each asking whether we did not concur in his views, and if so, whether we would not publish our opinion. There is no reason why we should lean to one side or the other, further than we feel justified by the facts. Of Mr. Worman we know nothing. Some tell us that he is not a German, that he cannot speak the language of which he undertakes to write or compile a grammar for. All this may be true for aught we know or care; for strange though it may appear to some of our readers, if none were to compile

grammars but those who understand the languages which those grammars purport to teach, respectively, we should not have one Greek or Latin grammar for every score, each of which is claimed by its publishers to surpass all others in "excellent features," the author being a celebrated professor in some eastern, western, or southern college or university famous for its superior erudition. If one can become the author of a Latin grammar, for example, while he could not for the life of him read ten lines correctly in an ode of Horace or a satire of Juvenal, without having "practised" on the same, grammar and dictionary in hand, some hours previously, while he could not read one line of the preceding or following part without such preparation, what is there so very horrible in undertaking to compile a German grammar under similar difficulties?

Be this as it may, it is sufficient for us to be satisfied, as we are, that, wherever Mr. Worman was born or educated—whether he can speak or write German or not—the grammars which bear his name are really good works. For the same reason we do not permit ourselves to be influenced by our lack of admiration for Mr. Worman's publishers as such. Sometimes, indeed, the Messrs. Barnes have published excellent books; but at other times they have published books of the opposite character, and our pages will show that, while we have sought to do ample justice to the merits of the former, we have as freely and fully condemned the faults of the latter.

A. Baskerville's Practisches Lehrbuch der Englischen Sprache, gänzlich umgearbeitet und für den Gebrauch in Amerika eingerichtet, von GUSTAV FISCHER. (*Dr. Baskerville's Practical Text-Book of the English Language, entirely revised and adapted to be used in America.*) By GUSTAVUS FISCHER. 12mo., pp. 318. New York: E. Steiger. 1870.

WE have carefully examined this work and can confidently recommend it to such of our German friends as desire to acquire a thorough, grammatical knowledge of English. The author perfectly understands the genius of our language; he is entirely familiar with its principles, and capable of appreciating its abundant resources; and, what is more, he possesses the rare faculty of communicating, happily and fully, through the medium of the German, even the most difficult part of that language.

Nor does the editor of the American edition prove himself less competent for his task. Some time since we happened to form the acquaintance of Dr. Fischer, and were pleased to find him not only a good

specimen of a German savant, but, also, quite an accomplished English scholar. To these remarks, brief as they necessarily are—the "Lehrbuch" having reached us just as we were closing the last sheet of our present number—we need hardly add, that American students of the German will also derive considerable aid from Dr. Fischer's work.

The Student's Mythology: A Compendium of Greek, Roman, Egyptian, Assyrian, Persian, Hindoo, Chinese, Thibetian, Scandinavian, Celtic, Aztic, and Peruvian Mythologies, in accordance with Standard Authorities. Arranged for the use of Schools and Academies. By C. A. WHITE. 12mo., pp. 315. New York: W. J. Widdelton. 1870.

THE title of this work embraces a wide range; it leads the intelligent reader to expect much; but, very differently from what happens ordinarily, in such cases at the present day, no one will be disappointed on a careful examination of the multifarious contents. For our own part we have, on the contrary, been agreeably surprised after having devoted much more time and attention to the book than to any other recent text-book; and we are convinced that no competent educator who examines it with equal care will wonder that, as we are informed in the preface, it was a favorite, both with teachers and students, even while in manuscript.

"The Student's Mythology has been in use in manuscript for nearly three years, in one of our largest academies, where it has been received with much favor by both teachers and pupils. Even in that form which subjected them to the inconvenience of long dictations, it was preferred to any of the ordinary text-books on the subject. Copies were sought for the use of other institutions, and the principals of the academy referred to consented that the work should be prepared for the press."

Most willingly do we admit that there is not a word of exaggeration in this; for there is no work we recommend with more sincere pleasure than a good text-book; and mythology is a subject of much greater importance than it would seem even to the most intelligent at first sight. Surely it is necessary that we should understand what pervades to a greater or less extent the most valuable part of every literature. It should be remembered that some of the finest passages in the noblest productions of the human mind are utterly unintelligible, or, at least, incapable of being appreciated in their full force and beauty, without knowledge of mythology.

To this we need only add that the large mass of facts in "The Student's Mythology," drawn from all the great literatures of the world, are admirably arranged. Besides a copious table of contents, in which the classification is faultless, the student has the advantage of a full alphabetical index. A work evincing so much taste and judgment, and such a thorough acquaintance with the *science* of teaching, should be

ell gotten up; and we are glad that, far from having any fault to find
this respect, in the present instance, we are quite pleased with the
pography, paper, and binding. There is nothing gaudy; on the con-
ary, a chasteness marks the *tout ensemble*, which is in harmony with
e contents of the book.

Greek Grammar for Beginners. By WILLIAM HENRY WADDELL, Professor of Ancient Languages in the University of Georgia. 16mo., pp. 104. New York: Harper & Brothers. 1870.

THE decided merits of the slender volume which bears this modest le would have received much earlier attention at our hands, but a ung friend of ours, who is a devoted student of the Greek, took it om our desk without making us aware of the fact, just as we were ping our pen to review it. To-day he returns it, but only with the ndition that he can borrow it again for at least two months; although is by no means a "beginner" in Greek, being able to read Homer ite intelligently, with very little aid from the dictionary. We are so uch pleased with his judgment as to the extent to which the work cilitates the study of the principles of the most beautiful of human ngues, that we readily comply with his wish.

No superfluous rules or definitions are given to discourage the beginr; nothing but what is essentially necessary to prepare him for the ifficulties which in time must come. It is almost superfluous to say at the paradigms are of this character; although many compilers of ammars at the present day seem to regard them as only of condary importance, for they often compress them into the narrowest ace, not only by means of abbreviations which the young student nnot be supposed to understand, but sometimes by the total omission important parts, especially of the verb.

Professor Waddell gives full paradigms of all the declinable words, ving the verb that particular attention which in Greek, more than any her language, its numerous highly artistic and beautiful inflections quire, in order that the various shades of thought they so accurately press may be appreciated by the student.

It is but justice to say that it is not merely by the selection of good reek grammars and readers that the Messrs. Harper have contriuted to lighten the labors of the student and encourage him in their erformance; the publication of works like Yonge's English-Greek exicon, edited by Dr. Drisler, entitle them to the gratitude of all dmirers of the language of Homer and Plato.

HISTORY AND BIOGRAPHY.

History of England, from the Fall of Wolsey to the Death of Elizabeth. By JAMES ANTHONY FROUDE, M.A. Late Fellow of Exeter College, Oxford. 12 vols. 12mo. New York: Charles Scribner & Co. 1871.

THE American publishers have done their countrymen a great service by placing within the reach of all a work so replete with interest and instruction as this; for Froude's history is already everywhere recognised as ranking with the best historical works of modern times. It is no exaggeration to say that no other embracing only an equal period—little more than half a century—contains so large an amount of multifarious information, a considerable portion of which is of the most important and startling character ever recorded.

Those aware of the indefatigable, scrutinising research of the author, will readily understand this, especially, if they also bear in mind that the age of which Mr. Froude writes is that of Henry VIII., Elizabeth, Mary, Queen of Scots, Luther, Erasmus, Galileo, Shakspeare, Ben Jonson, Tycho Brahe, Bacon, Kepler, etc., and that, far from confining himself to the events which took place in England in one of the most glorious periods of her existence as a nation, he takes a general survey of Europe, carefully recording every great event, no matter where it transpired, that had any bearing, directly or indirectly, on a country which was then, perhaps, more than ever, all-powerful in its influence on the greatest nations in the world. To this remark it is almost superfluous to add that both Scotland and Ireland receive due attention at the hands of Mr. Froude; nor has either country any just reason to reproach him with English prejudice, or any disposition to distort or misrepresent facts for the purpose of either excusing or glorifying England.

The greatest thinkers of England are those who have always been most gentle and friendly in estimating the characteristics of Ireland; nor does Mr. Froude form an exception. He fully corroborates the testimony of Thierry, and other authors, that even those of the English who went to that country with the intention of aiding in subduing and oppressing the people soon became more Irish than the Irish themselves.* If the reader will bear in mind that "an understanding not to be moved" and "good sense" as to British domination were among the chief qualifications required from candidates for office in Ireland, he will be the better able to appreciate the spirit in which Mr. Froude turns his attention to that still unhappy country.

"The Irish difficulty under the Plantagenets, the Tudors, the Stuarts and the Guelphs has preserved one uniform characteristic. The country has exerted a *magical power of transformation* upon every one connected with it. The *hardest* English understanding

* *Histoire de la Conquête de l'Angleterre par les Normands, etc.* Par Augustin Thierry, tome iv, liv. xi.

given way before a few years of residence there; the most *solid* good sense has ited under the influence of its atmosphere."—(Vol. iv, p. 71.)

We can ourselves bear testimony to the remarkable change of feeling ich the best class of the English experience and cheerfully acknowlge. But we have not taken up Froude's History at this time for the rpose of reviewing it. Most of our readers are aware of its unquestionle and peculiar merits. The author is as lucid, graphic, and powerful, chaste, in style, as he is truthful, impartial, and honest in statent. That before us is what the publishers call the "popular edition." is printed in good, clear type, and neatly bound in muslin. Besides a rious alphabetical index at the end of the work, a full table of contents prefixed to each volume.

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esbyterian Reunion: Memorial Volume, 1837–1871. 8vo., pp. 568. New York: De Witt C. Lent & Co. 1870.

In our opinion it were well, not only for religion and morality, but so for civilization, that all the numerous sects into which the Christian orld is divided were to reunite, as the Old School and New School of e Presbyterian church have recently done. Since we have always urged he former, we presume we need hardly say that the latter has afforded s pleasure. If peace be desirable even between armies whose business t is to fight, how much more desirable is it between ministers of the gospel, one of whose chief functions it is to preach peace and good-will among mankind! Accordingly, let us hope to see the good example of the Presbyterians soon followed by the broken fragments of other churches, some of which are as much at war with each other as ever the Presbyterian were, either in Europe or America.

This, we fear, may be said with but too much truth of the High Church and Low Church of the Episcopalians; indeed, it may well be doubted whether there existed more bitter strife between the Old Church and the New Church at any time than there is at this moment, and has been for years, between the High Church and the Low Church. Unhappily, there are different other denominations which are similarly divided and at variance with each other; but in this brief notice we need only mention the Methodists and the Baptists, each of whom are divided into at least two rival sects, which, we believe, dislike each other as cordially as any "schools" or "churches," new or old, high or low, have done.

We must all admit that the best example of a united church at the present day is the Catholic church. But an important lesson may be learned by all churches, including the Catholic, from a little attention to the fact that it was not always so. For many centuries, while peace reigned within its bosom, neither the Mohammedans nor the Pagans were able to reproach the Christians with being divided into scores of petty

sects, all of which were more or less at war with each other, while e claimed to be, if not the only true church, at least the only church t was peculiarly favored by God.

But the spirit of dissension entered the Christian church at last, ever since old churches and new churches, high churches and low churc have exhibited a ratio of increase as large as the most thriving of D win's new species "from natural selection." The Catholic church profited by this lesson, so that, if we except the Jesuits, who are alw more or less belligerent, it can hardly be said to have any disturbing ment at the present day. In religion, as well as in politics or war, uni is strength, and never was its strength more strikingly illustrated than is at this moment by the wonderful progress made by the Catholic chur in this country; it being an undeniable fact that many of our most e lightened citizens belonging to different Protestant denominations a not only embracing its doctrines, but becoming more zealous Cathol than those born and bred within its pale.

The more reunions we have, then, the better; nor can we have a more appropriate memorials of such to commence with than books li that now before us. The "Memorial Volume" is historical, biograp ical, and statistical, and it is embellished with portraits of all the min ters of both schools who have been more or less instrumental in restori the Presbyterian union so long rent in twain.

The Rev. Dr. Miller contributes a record of the Old School from it to the present; the Rev. Dr. Stearns performs a similar work for the N School. The Rev. Dr. Sprague furnishes biographical sketches of t leading ministers of the Old School; the Rev. Dr. Humphrey performs a similar task for the New School; the Rev. Dr. Adams is the historian the Reunion; the Reconstruction is treated by the Rev. Mr. Plumb while the Future Church, as it is believed it should be, is sketched in o line by the Rev. Dr. Hall.

When we remark, further, that the appendix contains a large amo of miscellaneous statistics, we think we need hardly add that "Memorial Volume" will prove interesting, not only to Presbyteria but, to a greater or less extent, to all those Christian denominations t are willing to profit by the experience even of those whose religious d trines they regard as erroneous, but of whose intelligence and in lectual abilities there can be no question.

The Evidence for the Papacy, as derived from the Holy Scriptures and fi Primitive Antiquity. With an Introductory Epistle by Hon. Co LINDSAY. 8vo., pp. 339. London. Longmans, Greene & Co. 1

WE are indebted to the courtesy of the London publishers of work for a copy sent us by mail several months since; but being in

esting to scholars, altogether independently of its religious and historical character, on account of the large amount of curious lore it contains, one of that fraternity carried it off before we had time even to glance at it, and it was not until yesterday that we found it back again on our table. The title may imply to many that its object is religious controversy; but were this its character, we should leave it to others to examine, since to contribute as far as we can to reconciliation, and not to excite strife under pretence of serving God, is our unalterable aim. At least we do not regard the book before us as "controversial" in any disagreeable sense. To us "Evidence for the Papacy" seems a theme as purely historical as the antiquity of the Pope's temporal power; and the latter we discussed ourselves nearly four years ago,* showing from the best authorities who discussed the subject from the beginning of the Christian era up to our own time, that if the religious claims of His Holiness were waived altogether, it would still be indisputable that no king or emperor has a better right to his dominions.

Very few, if any, expected four years ago such complications as those which have recently taken place in Europe; whoever takes the trouble, however, to turn to the article alluded to, will see that we regarded it not only as possible, but probable, that the Pope would ere long be deprived of his temporal dominions. But it may also be seen that we reminded our readers that such an occurrence would not be new; that more than once the States of the Church were wrested from the Pope by means of the bayonet and the cannon, but that each time they had to be returned, and that there was no reason why what was accomplished by reason and reflection in the past, after war had ceased its ravages, should not be accomplished in the future.

It was not as a Catholic we spoke then of the Pope's temporal power, nor is it as a Catholic we speak now of the Evidence for the Papacy; at all times we speak as a Protestant, but like one, we trust, who does not allow sectarian feeling to cloud his reason or blunt his sense of justice. We might fairly be accused of the contrary sentiment, however, did we not admit that a large amount of the testimony adduced by Mr. Lindsay in this book is of the highest character.

In his introductory Epistle, which extends to sixty-five pages, the author (who is a convert from the Anglican to the Catholic church) gives his "Reasons for Secession," urges the "Duty of Inquiry," and maintains the infallibility "apostolicity," perpetuity, etc., etc., of the Catholic church. Then he proceeds to prove St. Peter's supremacy partly from the Scriptures and partly by the testimony of the Fathers

* National Quarterly Review for March, 1867, No. XXVI.

(*Consensus Patrum*). A "second inquiry" is devoted to the Papal Supremacy, which is maintained by the same two-fold means.

We confess that it is the numerous quotations from the Primitive Fathers which interest us most. These show but too plainly that many of the bishops and archbishops of more than a dozen centuries ago were much more learned than are some of their reverend and right reverend successors of our boasted nineteenth century. We learn also from those curious citations, though only by implication, that the ancient Fathers were much more father-like to their priests, as well as to their flocks in general, than some of the modern Fathers, although we cheerfully admit that there are prelates among the latter, even in our own republican country, who would compare favorably in learning and liberality of sentiment, as well as in piety, with some of the best of those whose word is now held to be very nearly, if not quite, as good authority as Scripture.

BELLES-LETTRES AND SCIENCE.

Episodes and Lyric Pieces. By ROBERT KELLEY WEEKS. 16mo., pp. 164. New York: Leypoldt & Holt. 1870.

THE famous Arabian naturalist, Aboul Feda, describes an orchard situated near Samarcand, which yielded three kinds of apples, but no other fruit. One of these kinds—called the Ferdusian pippin—was acknowledged by all to be the best in the world; but it grew only in favorable seasons—sometimes not more than once in seven years. During the intervening time the trees which produced it did not even blossom. When the favorable season came, however, there was such a prodigious abundance of the prized apple that it not only supplied the whole surrounding country, but was exported to all parts of the world, and still sufficient was left to enable thrifty dealers to supply at least the wealthy epicures until there was another harvest of the precious fruit.

The second kind was of the crab species. The year the pippin flourished there were scarcely any crabs, but, upon the other hand, the crabs multiplied immensely according as the pippin became scarce. Although the crabs were sour and crude, those having a pretty strong stomach, and not used to the pippin, could eat them very well; nay, some declared them excellent, not only as good as the pippin, but better; but we are told that this class had never tasted the latter fruit.

The third is described as half crab, half horse-chestnut. This species multiplied in a ratio still more wonderful than the crab pure and simple, so that some local naturalists compared its reproductive powers to those of the locust. Whether this was a fair comparison or not, none, save the lowest class—those whose stomachs were of the strongest tex-

ture—could be induced to eat the hybrid fruit; and even this class found it almost impossible to digest it.

We confess that these different kinds of apples remind us forcibly of as many kinds of poets that claim attention and renown at the present day. The pippins have not had a favorable season for some time; but the old are so well preserved that we are yet in no serious need for a new crop. In the meantime the crab and the hybrid grow more and more prolific from year to year; one surpassing the other in productiveness in proportion as it becomes more and more worthless itself.

Now, in which class shall we place the "Episodes and Lyric Pieces?" We dare say that Mr. Weeks himself hardly expects them to be ranked with the Ferdusian pippins, nor shall we be so uncivil as to rank them with the hybrid class: it follows, then, that for the present at least they must take their place among the crabs. If, in the course of our examination—which must necessarily be brief—the reader becomes satisfied that our author is misplaced, we shall have no objection to his being promoted; for, since we know nothing whatever of Mr. Weeks further than we learn from his book, we can hardly be supposed to have any prejudice against him.

Discarding natural history at this point, we think it proper to say that there is nothing particularly sour in the volume before us; but it should be remembered that crabs have other qualities besides their rather disagreeable acidity.

At all events, Mr. Weeks deals much more in sugar than in acid; indeed we think that "Sugar Plums" would have been a more appropriate title for his present book than the one it bears. The term "Episodes" is not properly applied to a series of detached pieces on different subjects; it is proper in regard to poetry, only when applied to passages introduced incidentally into an epic, or other long poem, for the sake of variety or illustration, as the episodes in the Iliad, the Æneid, and Paradise Lost. Aristotle, the best authority on the subject, tells us that the episode is the part of a tragedy intervening between two complete odes of the chorus.* Further on† he tells us that the episode should be suitable to the plot. In speaking of Homer the same great critic gives him the highest praise for the skilful use he makes of episodes in the Iliad, for the purposes of illustration and variety. "But now," he says, "having selected one part of the war he made use of many episodes, *such as the catalogue of the ships, etc.*"‡

But we fear that "Lyric Pieces" are quite as inappropriate in the present instance as "Episodes." At any rate it requires more discrimination than we can pretend to possess to tell which are the Episodes and which are the Lyrics, especially as the titles of particular pieces are in general as inappropriate as the general title of the volume. Thus, for

* *Poetics*, chap. xii. † Chap. xvii. ‡ *Ibid*, chap. xxiii.

example, the first piece is entitled "The Return of Paris;" but, exc that it mentions Hector, Ilion, and one or two other classic names might as well have been "The Return of Smith."

There are not even a few names to justify the title "In Corint which might as well have been "In Kansas," while "In Collatia" mi with at least equal appropriateness, have been "In Utah." We not want, however, to attach too much importance to titles, but quite willing to accept the philosophy that "the rose by any o name would smell as sweet." Nay; we do not care how unclassic title is, if the performance that bears it is classic. Now, let us fo moment judge our poet by this test. The first piece, as we have sai "The Return of Paris," and it commences as follows:

> "I stumbled thrice, and twice I fell and lay
> *Moaning and faint*, and yet I did not pray
> To my God or Goddess of them all;
> *Because I never doubted, climb or crawl*,"—(p. 3.)

How much like an Homeric episode this is, the reader may say for himself. But what of the poetry? A piece may be highly poetic, full of genuine inspiration, and yet have no particular resemblance to any thing Homeric or Grecian. But is that, or anything of the kind, the case in the present instance? Before turning over a single page, we transcribe a few lines more and ask, are they of the inspired order?

> "And now, what shall I pray for? since my whole
> Wish is accomplished, and I have your face
> Once more by mine in the remembered place,
> And the cool hand laid on my head aright,
> A little while before I die to-night."—(p. 3.)

Is this poetry? or is it prose? Supposing it were in the usual for of the latter, would it not be quite as much like it as it is now li poetry?

Passing on to "In Corinth," we search for something "racy of t soil." But what do we find? Let the following *morceau* answer:

> "I saw her *very seldom* in my life—
> *Too very seldom*, as I used to say;
> *It irked me bitterly* to waste the days
> So far from Corinth and the sight of her.
> *And does it irk me now to think of this?*"—(p. 15.)

We confess that it *irks* us not a little to search for poetry in pass like this. We are not easily discouraged, however, so we read on; if we do not discover a vein of poetry we at least learn impo news:

> "She is quite safe, I know, and out of reach—
> Quite out of reach of that accursed—God!
> That I could kill him! She is surely safe."—(p. 17.)

This, however, does not end the story; some very interesting follow—such, for instance, as these:

" When I first heard
That she was brought before *that beastly Judge*
For blasphemy against his foolish Gods,
I knew what I was born for. When they said,
' 'Tis as pretext, this charge of blasphemy,
'Tis not the first time he has *played this game.*"—(pp. 17-18.)

nnot answer for our readers ; but to us this is much more suggest- Bowery than of Corinth, though far be it from us to deny that line especially is highly classical. But yet finer passages still Of the heroine we are told how

" ——she raised her eyes,
Not shamefully, but grandly, all the place
Seemed changed and sacred—a good place to be ;
Not as I called it, as I watched outside
A *dung-hill darkened by a spotless rose*," etc.—(p. 20.)

r puzzle those unacquainted with optics how "a dung-hill" *darkened* by a spotless rose," but there is a line a little further ich reads,

" And the dung-hill a garden having her."

nay be sound doctrine in horticulture (a dung-hill "having" a young lady is, at all events, something uncommon), but it as rather deficient in poetry. But the lady is not merely "a se," she is also "a speckless pearl," "a single star," etc. (p. 20) ; e told :

" She knew me in a moment, took my hand
And said, I thought—I knew that you would come.
What must we do ? I told her all the plan."—(p. 20.)

reassuring. Our readers would scarcely care to be told "all ' as it is told here, and so we pass it by. But only three w—one of these lines being occupied by the highly significant al expression "So she said." The reader is expected to make use after this, in order to be prepared for the startling an- nt which follows, and which so appropriately and happily oem :

" So she said.
But here they say, that I must fight the beasts
To-morrow. To-morrow ! I beat them yesterday."—(p. 21.)

t be admitted that this is "heroic," at least, in one sense ; and rd the victory of the hero over "the beasts" as an episode, we to acknowledge that the title of the volume is not so absurd

a favorite term of our poet, it *irks* us to proceed, and yet we ce at one "episode" more—"In Collatia." We do not take however, to show how utterly devoid it is of poetry, either unclassic, but merely to show from it how much Mr. Weeks n tiresome repetitions of words. Any one may indulge in an

occasional play upon words, although, if there be any wit in it, the grade of it is considerably lower than that of the pun. Let us first present the reader a few figures:

> "There are eight,
> Twelve, fifteen, *eighteen—eighteen, twenty grapes*,
> *Twenty grapes* on this cluster—*twenty*-one,
> *Twenty*-one *grapes* that just began to change."—(p. 25.)

This is perhaps classical, because grapes grow in classical countries; or it is poetical, because we have derived arithmetic from a poetical country. If it can be said to possess either quality, on any other ground, we cannot discover the fact; but let us add a few of the lines which immediately follow the grape-counting:

> "But so was this *unwilling*—look at it,
> This wretched *leaf*, this *leaf* that do I hold
> Or does it cling to my *unwilling* hand
> As clung the worm to its *unwillingness?*
> To its *unwillingness*, to its, to mine,
> To its *unwilling helplessness* and mine.
> It is our *helplessness* and not our will."—(p. 25.)

Had this been an isolated case, we would not have noticed it; but the same affectation is met with, in a form more or less tedious, throughout "Episodes and Lyric Pieces." When Mr. Weeks has no other words than such as "am" and "not," even these are presented to us *ad nauseam* as poetry; instance:

> "But I *am not* one of them, I *am not*—
> I *am not* one of them. I *am* myself."—(p. 24.)

In short, affectation is the thing which, above all others, spoils our author. He affects to be very classical, very witty, and very original; with what success he does so, our readers may judge from the above specimens, altogether independently of anything we have said. Had he depended less on what he is not, and more on what he is, the result would have been much better than it is; for it is almost superfluous to say that it is when he is most pompous and makes most display he is least successful in writing poetry. Several of his smaller pieces, in which he makes no apparent laborious effort to be classical, witty, or original, are passable enough; some of them are, indeed, quite pretty. This is true, for example, of "The River," "The Mist," "The Katydid," "My Place," and one or two others. We cannot say that there is much poetry in them, but they possess sufficient merit to satisfy us that if the author would study more, and select his subjects nearer home, at least until he has studied sufficiently, he could produce effusions of a much higher order than his "Episodes and Lyric Pieces."

The First and Second Part of a work on Government. By J. B. Colt. Pamphlet. Hartford: Case, Lockwood & Brainard, 1870.

As this *brochure* did not fall into our hands until we had nearly closed the reviews for our present number, we have only had time to read the first Part. To this, therefore, we must confine our remarks on the present occasion; but if the discussion be carried on in the following parts with so much vigor and ability as it is in the first, we shall not fail to present its salient points to our readers in a future number.

The work, thus far, is in the form of a dialogue—between a Republican, a Democrat, and a Monarchist; each of the *dramatis personæ* may be regarded as a fair average specimen of his party, in intelligence and liberality, the chief difference between the trio being that, in general, the most cogent arguments are put into the mouth of the Republican. The arguments of the Monarchist rank next, while those of the Democrat are in most cases scarcely worthy of the name; although, in a few instances, they are both logical and brilliant.

This will be best seen by allowing each to say a word for himself. The discussion opens as follows: "*Rep.*—What is Government? *Dem.*—An Evil. *Rep.*—No, a Good; the evil is only the measure of it in the instrument or instruments human. *Dem.*—To harness Liberty."

The discussion is carried on for some time before the Monarchist takes any part; yet he is evidently waiting for an opportunity to overwhelm both the Republican and the Democrat. "*Mon.*—I see you can never agree. One has a starting-point, a base of principle more adamantine, perhaps, than the other. *Circumstantial education*, outside of letters, *develops one kind of material* in mankind, *letters another*. Monarchy rightly developed in the interest of the whole has the power, by its every kind of education, to maintain peace or war with the least amount of cost or human injury."—(p. 8.)

Some, indeed, may regard this as stronger than any argument made use of by either Republican or Democrat, while others may inquire whether the "circumstantial education" may not be intended as a sly, if not ill-natured allusion to those teachings, the results of which are excessive tobacco-smoking, whistling for want of thought, slang, etc. In the latter case we think the Republican might have replied that there were times when monarchs were as ignorant and as ill-mannered as other mortals; although the Monarchist might have urged that what was done in the dark ages by certain rulers could hardly be held up as a criterion for the nineteenth century.

Be this as it may, we think the reader will now be able to understand that the plan of Mr. Colt embraces a wide range. In making his interlocutors discuss the principal forms of government of both the ancient and modern world, and present us striking pictures, especially those of Greece and Rome, he does not overlook the influences produced

by certain conditions of the social system, and certain quasi-religious ideas. Our author passes from the struggles between the patricians and the plebians in ancient Rome to those between the advocates of woman's rights and their opponents in our own country, paying some attention, by the way, even to our spiritualists; and when we differ with him most on certain points, we must admit that he maintains his views with ability and force.

In so hurried a glance as this we cannot undertake to examine the arguments of the different interlocutors in their bearing on each other; we will not lay the book aside, however without giving the reader some opportunity, however imperfect, to judge for himself as to the merits of "Colt on Government." With this view we turn over a few pages, and extract such two or three passages as happen to attract our attention, and, at the same time, are suitable for our limited space. Of all Addison's characters in the Spectator, his favorite was Sir Roger De Coverly. To the rest he was comparatively indifferent. He would allow his friend Steele to treat them as he liked; but such was his fondness for Sir Roger that he would not trust his character or his language for a moment to Steele, or anybody else. We are very much mistaken if Mr. Colt has not a similar fondness for his Republican; at all events, it is into the mouth of that personage he puts his best thoughts. Thus, for example, in speaking of the military character of the Romans, the Republican says:

"There is a greater than a warrior's excellence. When men save nations in fearful crises, as Napoleon did France, Gustavus Adolphus did Germany when struggling for religious rights, then they can receive no unmerited honors. The fame of Miltiades, Charlemagne, Henry XIV., or Washington, sinks deeply into the world-heart. Still, war is as a trade—unscrupulous, hard, rapacious, destructive, fomenting all the evil passions allied to all the vices, and is antagonistic to human welfare. The Roman rule was a despotism, cold, remorseless, self-seeking, and made them, while practicable,—calculating, overbearing, proud, scornful, imperious."—(p. 10.)

We are obliged to cut short this speech, though it is a very good and instructive one. The Democrat has but little to say; and that little is seldom dignified or classical. Turning over several pages we find the following:

"*Dem.*—A Monarchy cheap! An Empire, because we are going there. Well, we don't know where we are going. We know there are certain fixed facts for the living; the dead have had their day, and posterity will ripen from our manhood. I will not reason upon the question of your Peace-to-morrows, and your economical Monarchies with kings, nobles, and Priest-titles. The *Furies* don't belong to us no more than to you; they go it blind, perhaps sometimes God is there."—(p. 19.)

Now, although this purports to come from a Democrat, we confess that it reminds us more of a certain Secretary of the Treasury of the United States than of any other individual living or dead, whether democrat, republican, or monarchist. The "cheapness," "fixed facts,"

and "go it blind" are quite in character. If only a word or two on certain items of internal revenue had been added, the picture would have been complete. Whether the author designed anything of this kind or not we cannot undertake to say, further than that we think we detect a strong undercurrent of satire in several parts of the dialogue. The following may serve as an instance:

"*Rep.*—Woman suffrage means more than liberty. It means religious or well regulated liberty. Besides that, it means *openness and direct action* in all matters of Government, under just regulation, as contradistinguished from *recent legislative or official intrigues.*"—(p. 6.)

Whether this be a hit at our national professor of political economy or not, our author does not take leave of woman's rights without furnishing the fair advocates of those rights a handsome argument:

"*Rep.*—Woman is God's instrument of civilization, Love is her first enjoyment, and *to be beloved the end and aim of her temporal existence.* Their tendency is to ideal the man-animal in man. *The soft flower-scented zephyrs of summer are not rejected because they won't propel a ship!* their affiliation with cold, water winds, gives a power which all can comprehend."—(p. 7.)

We accept most if not all of this as just; but "if to be beloved" is "the end and aim of her temporal existence," in our opinion the way to attain that end and aim is not to compete with men at the polls. But we can proceed no further for the present. Although, as already remarked, we do not agree with Mr. Colt in all his views on the subject of government, we are not the less willing to admit that the first part, at least, of his *brochure* will amply repay the intelligent reader for a careful perusal.

APPENDIX—INSURANCE, GOOD, BAD, AND INDIFFERENT.

Eleventh Annual Report of the Superintendent of the Insurance Department, State of New York, 1870.

Fifteenth Annual Report of the Insurance Commissioner of Massachusetts for 1870. Part II, Life and Accident Insurance.

THERE is nothing particularly remarkable in either Report this year; yet each will repay the perusal of all who take any interest in the important subject of which it treats. Both show that, although a large number have been deterred by the conduct of such underwriters as those we have criticised from time to time, the public, in general, continue to evince an increasing faith in the advantages of insurance. This shows the good sense and intelligence of our people.

There are cheats and sharpers in all kinds of business—nay, in all professions; lawyers, physicians, and even clergymen, as well as bankers and merchants, sometimes prove bad men; but none save the thoughtless and narrow-minded condemn all on this account. The effect it has on

the sensible portion of mankind is to induce them to appreciate the honest and faithful all the more. Nor have we ever written on insurance, or any other subject, in a different spirit; but there are none who impose on the public so glaringly and habitually but they will pretend to be a very ill-treated, slandered people if their peculiar mode of operation is pointed out.

There is no more ancient trick among a certain class of malefactors than that of pretending that any serious charge or imputation against them, individually, is an "attack" on the profession or calling to which they belong. This was well but painfully illustrated not long since by a minister of the gospel in a certain village not very far from New York, who was caught in the very act of robbing his neighbor's trunk and denounced to his congregation; although he was seen by several and had often been suspected before, his only defence was that it was not he, but the Methodist church, nay, the whole fabric of Christianity that was attacked, and that satanic infidelity was the cause of the whole scandal. It need hardly be added that many believed the accused and warmly sympathised with him, until they, too, lost some of their worldly goods in turn, and finally the culprit had to acknowledge that he had a monomania for certain kinds of theft. Now who thinks anything the less of the Methodist church, or of its ministers as a body, on account of the operations of the Rev. Dr. Klepteis?

It is true that the churches of the village were not so well filled for some time after the exposé as they used to be prior to that event; the reason was that a large portion of mankind have two characteristics in common with the sheep and the deer; that is, they never think, and they are easily frightened. But as the sheep and deer driven from rich, well-watered valleys by perhaps the shadow of a fierce dog or wolf, are apt to return when they see the goat and even the hare resort to them and thrive in them, so are scared men apt to return when they see their more courageous neighbors continue to believe that, after all, there are such things as human honesty, intergrity, and fidelity.

Recently there has been this sort of fluctuation in life insurance. A portion of the public have been frightened by the fraudulent operations of a certain class of underwriters, both in England and in our own country; but finding that things are not so bad as they thought, their former faith in insurance is slowly but steadily reviving. Events which are transpiring at the present moment will no doubt produce another scare, although they are such as ought to have been expected by all who have paid any attention to ethics, and have the least knowledge of simple arithmetic, not to mention algebra or geometry. At any rate, if our readers lose by those events the fault is not ours, for we have put them on their guard often and plainly enough. A case in point is just

ore us; from the court reports of the New York Herald of the 18th t. we extract the following passage:

"A very interesting and important, though almost rusty, if not obsolete, requirement aw has been taken up and for the first time in many years put to its legitimate use and lication. A petition has been presented to the Supreme Court on behalf of the in-ers in the Great Western Mutual Life Insurance Company for the issuance of an order the court upon the company to show cause why the business of said company should be closed and the company dissolved. It may, for the information of the general lers of the HERALD, be here remarked that *there are still even in our practical days panies who do business upon the principle of the universal insurance and assurance sys-of Mr. Tigg Montague, and that there are to-day living victims of the unblushing assur-es of the representatives of the said Mr. Tigg Montague who too late find out that they have n perhaps for years paying into a concern which, like the lion's council chamber, had many itors thereto, but no returns therefrom.* In this case the insurers in the company apply the court for an order to compel the company to show cause why the business of the mpany should not be closed and said company restrained from exercising any of the cor-rate powers or franchises of said company, and from recovering, collecting or disposing any money, property or effects owing to or held by said company."

We have italicised the facts representing a state of things against hich we have been warning the public these ten years past; we have ught several times to protect the credulous from the wiles of this very mpany, as we will presently show those who may not remember the t. In the official report on which the proceedings are founded, Mr. orge W. Miller, the superintendent of the insurance department, declares t he has found "that the entire liabilities of said company exceed its ire assets about $140,000."

This does not surprise us in the least; three years ago, if not longer, l in almost every number of our journal issued since, we have ranked t company among those whose policies we regarded as little better n so much waste paper. But we need not go farther back than one r. Thus, in our number for December, 1869, we designated that com-ny as "The Bage and Shader *Great* Paste Diamond Mutual" (p. 202) luding in the title both the president and the secretary, the "paste, mond" part having reference to the fact that the company boasted of mbering among its directors a certain successful vender of "jewels." ving mentioned several other corporations in the same category, we de such comments as the following: "Perhaps some of our readers l think that our English cousins ought to be very much frightened if these companies would die in more or less rapid succession notwith-nding *the ostentatious display of wealth and consequence* made by some hem, and the display of impudence and effrontery made by all" (lb.). is was in allusion to the panic caused in this country by the failure of many English companies whose early demise had been predicted in a ilar manner and from similar data in England.

In our following number we called the attention of our readers to s significant fact that the class of companies which opposed the investi-ion into the affairs of our insurance companies ordered by the legis-

ature were the American Tontine, the Great Western Mutual, etc., etc.* Alluding to the managers of those companies which maintain the credit of American underwriting, we observed: "It amuses those gentlemen as much as any farce or low comedy could, to hear orators like Morgan, Bage, etc., etc., preaching ethics" (Ib.). A little further on in the same number will be found the following: "We have remarked on a former occasion that the titles of a certain class of companies go, like dreams, by contrarieties, as the *Great* Western, the *Empire*, the American *Popular*, etc. (p. 417). This is but little of what we said on the subject, but it should have been enough.

Another of the concerns which we have been in the habit, for years, of placing in the same list, is the United States Life. This, we believe, has not yet passed into the hands of the "receivers," but its late president has found it necessary to retire from its management exactly as we have often predicted he would, and the old decrepid affair has amalgamated with a new hungry affair, which, according to the ingenious plan of miscalling above alluded to, was styled the "Ben Franklin Mutual Life."

The gentleman who got up the latter once did a large and profitable business as the agent of the Phœnix Mutual, of Hartford, one of the best companies in America. But prosperity was too much for him; he sighed, in the midst of it, to have at least the title of President, but his reign in the Ben Franklin Mutual was nearly as brief, and quite as inglorious as that of poor Sancho Panza, when placed in a somewhat similar position by his renowned master the Knight of the Rueful Countenance. Fortunately it so happened that, just as the burlesque on our great philosopher was in its last gasp, the United States Life was glad to find almost any body that ever filled or furnished an insurance policy willing to be called its president. However, it seems the amalgamation is now complete; we need hardly inform our scientific readers that the chief ingredients in the amalgam used in the process were invisible dust, brass, and oil of vitriol. How long these will hold the United States together remains to be seen.

We might mention several other companies that boast of "all the modern improvements," which, if they are not yet called upon by the proper authorities to close their offices and cease to swindle the public, or if they are not engaged in "amalgamating" with each other, will be sure to arrive at one result or other before long. As we have on former occasions mentioned the names, at least of the majority, it is not necessary that we should do so now. We prefer giving them an opportunity of mending their ways during the approaching holidays; making no criticisms until we see their next annual reports. In the meantime we will take a hurried glance at the reports before us, if only to show that they

* No. XL., p. 44.

fully bear us out in the statement that, although the bad and indifferent rather grow worse than improve, the good continue to increase the public confidence in the real advantages of life insurance. Thus the Massachusetts commissioner, in indicating the progress made, makes the following remarks:

"A single comparison will forcibly illustrate the popular appreciation of Life Insurance, and the immense growth of its business. During the decade just now closed, the Companies doing business in this Commonwealth (more numerous of course, in its last than in its first year) have made *most wonderful advances*, representing an amount of outstanding insurance increased from one hundred and fifty-one millions to nearly *two billions* of dollars, with a net premium reserve swollen from thirteen and a half to almost *two hundred millions of dollars*."*

Although these numbers are so enormous as scarcely to be comprehended, they do not exaggerate the facts. A little further on the commissioner pays a compliment to the underwriters of Massachusetts, the truth of which is equally undeniable:

"It has been said, with pertinence and truth, that the business of Life Insurance was inaugurated in this Commonwealth by *men of intelligence, public spirit, and uprightness*, who in an *eminent degree enjoyed the confidence of the people*. It may also be added, with equal pertinence and truth, that, so far as the influence of such a prestige has been perpetuated, the principles of integrity and sound policy have been scrupulously cherished and applied. Under *such auspices*, fraud, deceit, and financial corruption *cannot long flourish with impunity*."—(p. ix.)

The men to whom the language we have italicised applies, are such as the founders and present managers of the New England Mutual, which company, it will be remembered, we have always spoken of as exemplary. Its first president was Judge Philips, who was once the editor of the North American Review, and whose writings on insurance are regarded as authorities in Europe as well as in this country; and the gentleman who occupies that position now, has occupied it for years, and has been connected with the company, in one capacity or other, since its commencement— being now one of the oldest if not the very oldest underwriter in America—is eminently worthy, in inteligence and ability, as well as integrity, of succeeding such a man. Thus the "prestige" of which the commissioner speaks is one whose influence we have often indicated in these pages as in the highest degree salutary.

From a table, showing the progress of the companies of other states, we extract the following figures which, it will be remembered, are also corroborative of the views we have often expressed relative to the institutions which have produced such results:

COMPANIES.	INSURED, 1860.	INSURED, 1870	INCREASE.
Equitable, New York	$808,000 00	$134,078,586 35	$133,270,586 35
Knickerbocker, New York.....	1,848,994 00	65,518,967 51	63,674,973 51
Manhattan, New York.....	10,333,644 29	46,418,793 36	36,085,149 07
Mutual Benefit, N. J.....	22,559,177 00	130,023,585 12	107,464,408 12
Phœnix Mutual, Ct.	2,515,300 00	50,856,958 50	48,341,658 50

* Report of Insurance Commissioner, p. viii.

It is a much more agreeable task to us to indicate results like these on the part of American companies than to criticise and denounce, but to refrain from the latter when deserved, as in the instances in which we have done one or the other, were worse than mistaken kindness, or spurious patriotism. As reasonably might it be expected that, when the superintendent of the Insurance Department brings a company into court, as in the above case, so that the public may not be any longer imperilled by its operations, the judge should refuse to interfere, lest he might injure such useful and honorable American citizens as Bagé, Shader & Co.

In accordance with this feeling, when we happen to meet with facts or figures tending to illustrate the good done by energetic, faithful companies to themselves as well as to the public, we are glad to record them. Thus we have just laid our hands on a paper which reminds us that the Manhattan Life had paid its policy-holders up to the 1st of January last three millions of dollars in dividends, and that by the 1st of January next, the grand aggregate will have amounted to nearly, if not quite, three millions and a half ($3,500,000). Add to this the sum paid promptly to widows and orphans, amounting in round numbers to *four millions*, take into account that there remains a surplus of nearly two millions ($1,729,317), and the *tout ensemble* will give some idea of what intelligence, energy, and perseverance can do, when guided by unswerving integrity.

The Manhattan always reminds us of its worthy off-shoot, the National of New York. From a comparative table before us, taken from the last Massachusetts Report, it appears that, of twenty-six leading life companies doing business in Massachusetts during the year ending December 31, 1869, whose assets furnished the largest security to its policy-holders after deducting its liabilities, was the National. We wish to avoid comparisons that might seem invidious, whenever we think we can do so consistently with the public interest; accordingly, we omit in this table the names of the other twenty-five to which the National is compared, but retain the figures showing the ratio:

FOR EVERY $100 OF LIABILITIES

The National New York has.....	$119 01	——	——	.....	$110 48
—— ——	118 92	——	——	.....	110 47
—— ——	118 11	——	——	.....	109 91
—— ——	117 17	——	——	.....	109 87
—— ——	116 82	——	——	.....	109 13
—— ——	116 71	——	——	.....	106 73
—— ——	116 11	——	——	.....	106 80
—— ——	115 95	——	——	.....	105 81
—— ——	115 86	——	——	.....	105 49
—— ——	115 39	——	——	.....	105 23
—— ——	114 67	——	——	.....	104 81
—— ——	114 47	——	——	.....	104 36
—— ——	111 90	——	——	.....	104 27

RESULT OF ABOVE EXHIBIT:

"The Actual Premium Reserve of the National is	$119 01	for every $100 it owe
The Average Reserve of the above Twenty-six Companies is	115 61	"
Difference in favor of the National.....	$3 40	"

None of our companies look to the future with a keener or more scrutin is eyeing than the Mutual Benefit of Newark. Our readers may remember that in our last number we gave an extract from its recent report which concluded as follows:

"Some make all policies incontestible from any cause—allowing the party to practice any vicious habit known to shorten life, or to *destroy life itself*. These, withthe right, or license, to commit crime, even if its consequences shorten life, show such a departure from fundamental ideas, inseparable from our business of Life Insurance, that it is to be expected the coming years will result in *a terrible shaking among the Companies*."

Need we say that the "shaking" has already commenced? It might well seem an exaggeration that any company would encourage the destruction or shortening of life; but the reader may remember that it is now nearly, if not quite, a year since we commented on the boasted "new feature" of the New York Life, which accepts suicide as legitimate. Is it any wonder, then, that suicides exhibit a large increase among policy-holders? Accordingly, those companies who mean to do right are taking the necessary precautions against the "killing feature;" thus the Mutual Benefit has procured the opinion of Judge Teese, of Newark, on the subject, in the form of an able and learned argument, which concludes as follows:

"No one ought to be allowed to insure his life with the idea that if, through disgrace or misfortune, he desires no longer to live, he may put an end to his life, with the certainty or strong probability that his life insurance policy will be paid. Such doctrine is as subversive of good morals, as it is unjust to the insurers."

To us this is nothing new; nothing more than we have said in these pages when the suicide feature was introduced; it is precisely because it corroborates our own view that we quote it—the same as we quoted the "shaking" prediction in our last.

That companies which protest against doctrines "subversive of good morals" should be subjected to attacks from the authors and champions of those doctrines is no more than might be expected; accordingly, the Mutual Benefit, the Phœnix Mutual, the Knickerbocker, the Equitable, and the Manhattan are occasionally the objects of no slight amount of wrath. That which has excited the most recent ire among the manufacturers of "new features" and their agents, is, we believe, the Knickerbocker; but it seems rather to prosper than to suffer, abroad as well as at home, even during the most ingenious efforts made to weaken the public confidence in its integrity. Since it adopted the cash principle exclusively, its progress has been greater than ever. A Chicago paper, usually well informed on the subject, makes the following comment on the change:

"It is also to be remembered that the Knickerbocker consummated this revolution,—not for speculative reasons, at random or as a mere experiment,—but from honest and thorough conviction. It never stood more fairly than at the very moment of the change—perhaps never so well—since its organization. Whatever criticism it might have evoked at any previous period, the company entered upon the present year, in splendid and solid condition,—in the very vanguard of life insurance—with *seven millions of dollars* of assets and nearly *four millions* of income."

This is high praise, but we do not believe it is any exaggeration of the

facts. The same writer assigns many reasons for the success of the Knickerbocker; but with these our readers are sufficiently familiar.

We are not aware whether the Guardian Mutual numbers suicide among its "new features." At all events, if it has such fine "assets" as it boasts the widow seems to have some difficulty in receiving what she considers her share of them. There is, we believe, a suit in progress before the Supreme Court against that company in which the defendant is the widow of a gentleman who was formerly its examining physician. It seems the doctor neglected, or was unable, to pay, two premiums as they became due; his wife paid them, however, while he was still living; but it is alleged that the person to whom she gave the money, and from whom she obtained a receipt, was not authorised to receive it, although one of the company's clerks. It may be that the mode of payment was not strictly legal; but if all underwriters who could keep their money from the widow and the orphan on a mere technicality would do so, what would life insurance amount to? We do not pretend to be surprised, however, at the course of the Guardian; our readers may remember that, from the outset of its career, we have regarded it as a rather unsafe Guardian, but, of course, may have been mistaken in our opinion all the time. It is now alleged, we understand, that Dr. Koelges was not a learned or good physician; but, if so, we think that Dr. Peckham, the president of the company, should rather have sympathised with him, since, if the deceased was as bad a doctor as himself, it is pretty certain that he could hardly have been worse; and Garrick, who was a good judge of human nature, tells us

"A fellow feeling makes one wondrous kind."

Be this as it may, we feel satisfied that, so far as the matter is in his power—that is, so far as the law allows—the cause of the widow will be safe in the hands of Judge Barnard.

Far be it from us to maintain that no company should contest a case, for if this course were pursued all would soon be robbed. It is the interest of all policy-holders that no payment should be made but such as are just and lawful There would be no end of suits against companies if a certain class of policy-holders found that both the courts and the public were in favor of making the former pay all claims; there should be no such morbid sympathy with injustice and wrong. If we are opposed, as we always have been to swindling underwriters, we are not the least opposed, and never have been, to swindling policy-holders. But it is certainly no swindling on the part of a widow to claim the policy on her deceased husband's life merely because there has been an informality in the payment of a small portion of the premium. On the contrary, to render it necessary for her to go to law at all in such a case, is both unwise and unjust.

But on the same day we hear of the suit of the doctor's widow we happen to take up a Cincinnati paper, and find another widow giving public expression to her gratitude for $10,000, the amount of her policy on the life of her husband who had neglected *four* payments. The reason the lady assigns for her gratitude is, that her lawyer had informed her she could not en

ree payment. The company mentioned as having acted in this graceful
id generous manner is the Phœnix Mutual, of Hartford—one of which,
will be remembered, we have always entertained a high opinion.

We see no company that maintains its honorable prestige better than the
ecurity Life. It stands equally high in the New York and Massachusetts
eports. In the former its assets are marked $2,384,353.37; its cash in office
id bank, $59,204.70 (p. xxvii). In the latter, under the head of "increase
1869," No. of policies, 2,683, amount insured, $8,479,845.00.

The Continental (N. Y.) appears in all the official reports in a manner
at fully confirms its prestige as a solid and honest company. Thus, for
ample, taking ten New York companies in Table No. II. (p. 213), of Judge
iller's Report, under the head of "surplus" we find it has more than four
nes as much as all the other nine companies—very nearly half a million.
the Massachusetts Report it stands equally high. Turning to Table VII,
. lxxx), we find its excess of income over expenditures during the year
ding December 31, 1869—$350,214.86.

If the reader will compare these results with the results of almost any of
core of other companies "inaugurated" about the same time then he will
able to appreciate what the Continental has done. Take the concerns
own as "the Phipps companies," for example, *i.e.*, the Craftsmen Life and
e Merchants' Life; instead of the former having a surplus it has a defici-
cy of $31,864.60.* What may be the deficiency of Mr. Phipp's new struc-
re or whether it will continue sound until that enterprising gentleman has
d time to dispose of it, and get up another, is one of the many things of
hich we are ignorant.

The Asbury Life is a modest company; it makes no boast or display of
ew features" or "peculiar inducements," but it is intelligently and
nestly managed. Turning to the Massachusetts Report, Table VII,
. lxxxi), we find that the excess of its income over its expenditures during
e past year was $60,125.83.† In the New York Report its assets are
arked $304,351.05; its amount of "ready cash" $22,552, 43. This is a pretty
od record for so young and unostentatious a company. The Anchor Life
ntinues to reap the fruits of its intelligent energy and perseverance. It is
ready officially marked as having a surplus of $22,275.80.‡

There is but little said in either of the Reports before us, of Fire or Ma-
ne insurance. Neither exhibits any such increase in the number of com-
nies devoted to it as Life insurance. As for the marine branch, it is dwind-
ng into very slender proportions; our readers are aware that several ma-
ne companies have passed out of existence within the last five years; and
the few that are left, it would be rather a gain than a loss to the public if
t least half of them would also give up the ghost.

It would be far otherwise, however, with our fire companies, several of
hich compare favorably with the best in the world. We have taken the
ains to see how those companies stand in the Reports, whose modes of

* See Miller's Report, Table II, p. 213. † Table I, p. 210.
‡ N. Y. Rep., Table II., p. 214.

dealing with their policy-holders we have indicated as exemplary on former occasions; and we are glad to find that there is not one of them whose record is not good. Thus the most modest of all our New York companies —the Hope—appears in the New York Report, under the head of "gross assets," with $230,210.46; under the head of "cash in office etc.," with $5,058,98; while its ownership of United States securities is marked in the same table (p. 431) $40.900.00. This shows that Mr. Reese still maintains his character for that intelligent shrewdness which may be "slow but sure." The Washington Fire appears in the same table with assets amounting to pretty nearly a million ($783,052.19); cash in office and bank, $84,020 and United States securities $419,900. The Hanover shows that it is not without good means it has taken up its quarters in the granite palace of the Equitable, for its pile of assets is pret y nearly equal to that of the Washington, since it amounts to $726,399.94. As for the Ætna (Fire) of Hartford, we have no company in New York that has so large an accumulation. Our Home Fire is capital at boasting, but when it comes to the sober figures, however much it exaggerates, it cannot pretend that its assets amount to five and a half millions ($5,549,504.97), like the Hartford Ætna

But it is proper the public should understand that there are fire companies which, like the corresponding class of life companies, have, in point of fact, no assets—fire companies which would be utterly unable, even if inclined, to meet the claims which one fire of no great dimensions would subject them to!

THE

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ART. I.—1. *History and Doctrine of Buddhism in Ceylon.* By EDWARD UPHAM. London. 1829.

2. *Tree and Serpent Worship; or, Illustrations of Mythology and Art in India.* By JAMES FERGUSSON, Esq., F.R.S., M.R.A.S. London. 1868.

3. *Le Beuddha et sa Religion.* Par J. BARTHÉLEMY SAINT-HILAIRE, membre de l'Institut. Paris. 1862.

4. *Mélanges Asiatiques, en choix des morceaux antiques et de mémoires relatifs aux religions, aux sciences, à l'histoire, et à la géographie des nations Orientales.* Par M. ABEL RÉMUSAT. 2 vols. Paris. 1825.

5. *Die Religion des Buddha und ihre Entstehung.* Von CARL FRIEDRICH KOEPPEN. (*The Religion of the Buddhists and its Origin.* By CHARLES FREDRICK KOEPPEN.) Berlin. 1857.

6. *The Mahâwanso.* Translated by the Hon. G. TURNOUR. Ceylon. 1837.

7. *Die Larnaische Hierarchie und Kirche.* (*The Larnaish Hierarchy and Church*). Von CARL FRIEDRICH KOEPPEN. Berlin. 1859.

THE ancient history of Ceylon is exceedingly obscure; but enough is known to make it tolerably certain that in very remote ages this large and most beautiful island was the seat

of a powerful kingdom and of a thriving and numero
population. We find different names assigned to it at di
ferent periods and by different writers. Malte Brun infor
us that the appellative Selan, whence is derived Ceylon,
found in Cosmas Indicopleustes, in the sixth century, und
that of Sielen Diva, or the island of Sielen; but as A
mianus Marcellinus calls the inhabitants Serandives, and
the Arabian name Serendib is only a corruption of Selan-d
the latter term may be referred to a more ancient epoch, a
is probably the same with the Simunda, or Silunda,
Ptolemy. Another Indian name, Salabha, "the rich islan
may be recognised in the Salihi of the same geographer;
the ancients knew nothing of its Sanscrit name, Lanca, o
Singala, Chingala, or Sinhela, "the Isle of Lions."*

One of the principal sources, and certainly the old
for the original history of Ceylon, is the famous Hindoo
poem, the *Râmàyana*, which describes the exploits of
great hero Rama. Among these it is recorded that he
quered the island in order to regain the beautiful Sita,
had been carried off by the traitor Râvana, and conce
there. This poem deserves to be attentively studied, bec
it is almost the only testimony as to the condition of Ce
before the introduction of Buddhism, three hundred and
teen years before the Christian era.† The Hindoos, as
evident from the *Râmàyana*, had the strangest ideas respect
Ceylon, notwithstanding the fact that it was so near the
and the obscurity of their legends proves that they knew
little about it.‡ At the time of the introduction of Buddhi
and no one knows for how many ages previously, the wors
of the nâga, or serpent, prevailed among the natives
Ceylon, mixed up with demon worship and the worst sup
stitions of the Hindoo pantheon; and long afterwards,
even at the present time, the Buddhism of the Cingalese
and is hardly to be recognised as the same Buddhist reli
as that which prevailed in India.‡

* Upham, chap. i. p. 1.
† *Râmàyana*, chap. iv. st. 55, 77, 102, 108, etc.
‡ St. Hilaire, p. 319.
§ Fergusson, p. 54.

The Greeks were acquainted with Ceylon under the name of Taprobane, which M. Burnouf contends was derived from the Sanscrit word *Tàmraparna*, one of the names by which the Hindoos designated it.* But they never knew what religion the inhabitants of Taprobane professed; indeed they troubled themselves very little about it. The Roman emperor, Claudius, sent an embassy to the king of the island, but Pliny, who has alluded to it, contents himself with saying that the people worshipped Hercules.† On the other hand, the testimony of the Buddhist scriptures seems to be as distinct as such evidence can be expected to be—that Ceylon was inhabited by a Nâga race of serpent worshippers when converted to Buddhism. It is, however, doubtful whether the Râkshasas, whom Rama encountered in the island, were serpent worshippers or not. Snakes, though freely used in the stories and the paintings of the Cingalese, never appear as Rama's opponents in any of the numerous representations of that famous war.‡ Mr. Fergusson is of opinion that the conversion of the Cingalese to Buddhism, which was believed to have been complete about the time of Asoka, the great Hindoo king and reformer, two hundred and fifty years before Christ, was not by any means thorough; and that if the monuments of Ceylon were to be carefully examined, it would be seen that the people still adhere to their ancient faith. "Whenever any competent person," he says,§ "will look below the surface, I am very much mistaken if the old serpent worship is not found still practised by the aboriginal races in all remote parts of the island."

Whatever may be the result of the investigation into the serpent worship of Ceylon, there is no doubt whatever about the prevalence and importance of tree worship in that island. We need only mention the famous branch of the Bo (or Bogara) tree, which was sent from Buddh-ghya to Anurâdhapura, and received with utmost reverence by the Cingalese

* *Journal Asiatique de Paris*, Jan., 1857, p. 1 et seq.

† St.-Hilaire, p. 320. ‡ Fergusson, p. 55. § Ibid, p. 56.

monarch, Devanampiyatisso, and planted in a most conspic
ous spot in the centre of his capital. It is still reverenced
the identical one which the sacred books record to have be
planted by Mehindu, three hundred and seven years before t
Christian era. "So sedulously preserved is it," says Sir
Emerson Tennent,* "that the removal of a single twig is p
hibited, and even the fallen leaves, as they are scattered by
wind, are collected with reverence as relics of the holy pla
On the altars, at the foot of these sacred trees, the Bud
ists place offerings of flowers, and perform their accustom
devotions in honor of the Divine Author." There it has be
reverenced as the chief and most important deity of Cey
for more than two thousand years, and it, or its lineal de-
scendant sprung at least from the old root, is there worshi
ped at this hour. "The city is in ruins; its great dago
have fallen to decay; its monasteries have disappeared; but
the great Bo-tree still flourishes according to the lege
Evergreens never growing or decreasing, but living on fore
for the delight and worship of mankind! Annually thousan
repair to the sacred precincts within which it stands to do it
honor, and to offer up those prayers for health and prosper
which are more likely to be answered if uttered in its pres-
ence. There is probably no older idol in the world, certain
none more venerated."†

That both tree and serpent worship prevailed in ever
country in the old world has been clearly ascertained, an
the fact points to some common origin, either of the race
worshippers or of the religion. If not the oldest, it ran
at least among the earliest forms through which the hum
intellect sought to propitiate the unknown powers. And it
is singular that when the new world was discovered it w
found that serpent worship had long prevailed there; an
even now it is found lurking in out-of-the-way corners of
globe, as recently in Cuba and among the negroes in
southern states. We need not, then, be surprised to find tra

* *Christianity in Ceylon*, p. 335. † Fergusson, p. 56.

of it in Ceylon at the present day, when two thousand years ago it was the common religion of the people. Perhaps it is more extraordinary that they should entertain love and admiration for so deadly a reptile as the snake, especially in its fearful shape of a boa-constrictor or a cobra. Yet a closer investigation of the subject will reveal some very strange features connected with this worship. "The serpent alone," says an ancient author,* "of all animals without legs or arms, or any of the usual appliances for locomotion, still moves with singular celerity." In the motions of the serpent there are no jerks or reflex action, but a continuous progression in the most graceful curves. It moves apparently without an effort, with its head erect; its general form is full of elegance, its colors varied and often very beautiful, and its eyes bright and piercing. Their power to fascinate animals, birds, and human beings is well known, and has been made the groundwork of many a tale and poem. The serpent can exist for an indefinite time without food or apparent hunger. It also periodically casts its skin, and, as the ancients fabled, by that process renewed its youth. Then, again, its longevity was sufficient to make the superstitious forget how long a particular snake might have been worshipped in order to ascribe immortality to it. But that which originally impressed the minds of primitive men with mysterious awe was the sudden and deadly action of the reptile in destroying life, by the dart of a fang and the sudden spring of the cobra, or by the lightning-like embrace of the boa which crushes out life instantaneously.

How happens it, then, that when we meet with serpent worship in history the serpent always appears as the bearer of good gifts, the teacher of wisdom, the oracle of future events? Thus, with Eve, the serpent offers knowledge of good and evil. In the wilderness the Israelites set up a brazen serpent as their guide out of their difficulties, and as the healer of their sickness while Moses was absent. In Egypt,

* Sanchoniathon, quoting Taatus ap. Eusebium, Præp. Evang., 40.

Carthage, Pelasgic Greece, Mesopotamia, Persia, Bactria, India, Java, and the far East, the serpent was honored by the primitive races, and always as a benefactor. Nowhere was it thought necessary to propitiate it by sacrifice of life beyond what was necessary for food, or to appease it by human sacrifices or blood offerings. There is this peculiarity connected with it, viz., that no Semitic or Aryan people adopted it as a form of faith. When found in the countries before mentioned it was an out-crop from the underlying Turanian population, and was tolerated by their rulers in order to propitiate them, as in Greece and Rome. It vanished before the light of Christianity and the sword of Mahommed. It is as diametrically opposed to the spirit of the Vedas as to that of the Bible, and the spirit of these two works pervades, in a greater or less extent, all the forms of the religions of the Aryan and the Semitic races. On the other hand, any form of animal-worship is perfectly consistent with the lower intellectual status of the Turanian races, and all history tells us that it is among them, and essentially among them only, that serpent worship is really found to prevail. Thus we may naturally look for it among the Bheels, the Khouds, the Puharrees, the Cingalese, the Malays, and the other Turanian nations of Asia; also among the still lower types of the human race which are found in Africa and America.[o]

Serpent worship was utterly antagonistic to the mild spirit of Buddhism, and consequently was abolished by the Buddhist legislators wherever it was possible to do so; but it cropped up again and again wherever neglected, and remained in many places long after it had lost much of its meaning, and after human sacrifices, or the blood of animals, had ceased to be offered. This we find to have been the case in Ceylon after the introduction of Buddhism and also after the introduction of Christianity. We shall have occasion presently to notice the connection between the two. The period of the

[o] See the introductory Essay to Fergusson's *Tree and Serpent Worship*, where the whole subject is learnedly treated.

introduction of Christianity into Ceylon is matter of considerable uncertainty. The earliest notice of the existence of it in that island is found in Cosmas Indicopleustes, an Egyptian merchant who visited Ceylon in the reign of Justinian I., and published his *Christian Topography*, in order to vindicate the cosmography of the Old Testament from what he believed to be the heresies of the Ptolemaic system. In this work he tells us that "in Taprobane there existed a community of believers, with an episcopal form of discipline, priests, deacons, and a liturgy." From this it has been assumed that the Cingalese were converted prior to the fifth century.* But Cosmas expressly declares that the members of the church in Ceylon were Persians and merely sojourners, and that the natives and their kings were of a different religion.† There are some legends to the effect that Christianity had been preached in Ceylon by St. Thomas and St. Bartholomew; but there is no reasonable ground for supposing that India was ever visited by an apostle, although the tradition is supported by some of the early Christian writers, and Alfred the Great sent Swithelm, Bishop of Sherborne, to that country to visit the shrine of St. Thomas.‡ There is a still more curious tradition that Ceylon had been visited, and the Christian faith introduced, by the eunuch of Candace, whose conversion by Philip is recorded in the Acts of the Apostles.§ The probability is that these Ceylon Christians were of the same faith and had the same form of ecclesiastical government as the Syrian churches in the southern promontory of India, which were founded in the third or fourth century by Christians from the Persian gulf, whose successors to the present time have preserved a form of Christianity, however corrupted, and maintained an uninterrupted connection with the original church, first through the see of Selencia, and since through

* Hough's *History of Christianity in India*, vol. iii. p. 74.

† Ἔχει δὲ ἡ αὐτὴ νῆσος καὶ ἐκκλησίαντων ἐπεδημούντων Περσῶν Χριστιανῶν. καὶ κλῆρον ἀπὸ Περσίδος χειροτονούμενον καὶ διάκονον καὶ πασαν την ἐκκλησιαστικην λειτουργίαν,—οἱ δὲ ἐγκώριοι καὶ οὐ βασιλεῖς ἀλλόφυλοι εἰσιν.—Thevend. *Relations*. vol. i. lib. xi.

‡ Sharon Turner's *History of the Anglo-Saxons*, vol. ii. p. 148.

§ Hough, *ubi supra*.

the patriarch of Antioch. But with the decline of oriental commerce, and the diminished resort of merchants from Arabia and Persia, the travellers and adventurers who formed the members of the first Christian body in Ceylon ceased to frequent the shores of Malabar, never firmly rooted, gradually decayed and disappeared.*

The two Mohammedans, Ibn Vahab and Abou Zeyd, who visited Ceylon in the year 850, are silent as to the existence there of any form of Christianity, although Abou Zeyd states that the king who then reigned permitted the free exercise of every religion; and the island contained a multitude of Jews as well as of many other sects, even Tanouis or Mouichees.† Marco Polo, the Venetian traveller, who made his way to Ceylon about the year 1290, says that the inhabitants were idolaters,‡ and it is scarcely credible that had a Christian church, however small, been in existence, he would have omitted to mention so interesting a fact. Ibn Batuta, the Arabian traveller, who visited Ceylon in 1324, is equally silent in relation to Christianity, although he is particular in describing the emperor as an infidel, and he records the proceedings of the Brahmans and the Buddhists, and his pilgrimage to the sacred footmark on the summit of Adam's Peak.§ On the arrival of the Portuguese, A.D. 1505, and their conquest of the maritime provinces, the doctrines of Brahma and of Buddha were the prevailing religions respectively of the Tamils in the north and of the Cingalese throughout the rest of the island.

Ceylon was supposed by the Orientals to have been the seat of Paradise; but the Mohammedans hold that this paradise was not a terrestrial one, but elevated in one of the seven heavens, and that it was from this elevated paradise Adam was cast out on the mount Rahoun, in Ceylon,

* Tennent's *Christianity in Ceylon*, p. 3.

† Pinkerton's *Collection of Voyages*, vol. vii. pp. 183-217.

‡ *Travels*, translated by W. Marsden. London. 1818.

§ *Travels*, translated by Prof. Lee.

where he was buried, whence the mountain has been called "Adam's Peak." This is the most common tradition in Asia, and, as it has special reference to the island, it may be noticed here at greater length. It goes on to say that Eve fell at Gidda, a port on the Red sea near Mecca. Eblis (the tempter) fell at Missan, near Bassora, the peacock fell in Hindostan, and the serpent at Nisibis or Ispahan; that is to say, on the spots where these cities have since been built. Adam, overwhelmed by the misery of the life he was leading on the earth, and deprived of all consolation by the absence of Eve, shut himself up within himself, and, touched with regret at his sin, raised his eyes and hands to heaven to implore mercy. Then God had regard to his penitence, and sent down from heaven by angels a kind of tabernacle or pavilion, which was set up on the place where Abraham afterwards built the temple of Mecca. Gabriel taught him all the ceremonies which he was to practise around this sanctuary in order to obtain pardon for his sin and a true reconciliation with God. Adam fulfilled all these duties, and was thereupon conducted by the angel to the mountain of Arafat, a mountain which received this name because Adam and Eve met there after a separation of more than two hundred years. After this they withdrew to the island of Serendib (Ceylon), and labored at increasing their family.* Eve had twenty *accouchements*, and each time she brought forth twins, of whom one was male the other female. There is a disagreement among the Orientals as to the burial place of Adam. Whaithemah says he was interred at Mount Aboucais, near Mecca; but many others say that Noah took his corpse with him in the ark, and after the deluge caused it to be carried to Jerusalem by Melchizedek, the son of Shem. The oriental Christians adopt this last tradition, but the ancient Persians assert that he was buried in Ceylon, where his sepulchre was watched by

* "Travaillerent à multiplier leur famille," See D'Herbelot's *Bibliothèque Orientale*, lit. "Adam," whence this legend is extracted; see also lit. "Ranoun."

lions during the time the giants made war. The Imaum Giafar Sadih held that there had been three Adams previously to this one, and that there would be seventeen more.

It would appear, however, that the Christians and the Mohammedans have appropriated to themselves, without sufficient authority, the traditions respecting Mount Ranoun. They have chosen to connect with Adam what the natives of Ceylon attribute to a different personage. Marco Polo, speaking of Adam's Peak, describes it as a very high mountain, so rocky and precipitous that the ascent to the top is impracticable excepting by the assistance of iron chains employed for the purpose. "By means of these," he says, "some persons attain the summit where the tomb of Adam, our first parent, is reported to be found. Such is the account given by the Saracens. But the idolaters assert that it contains the body of *Sagomon-barchau*, the founder of their religious system, and whom they revere as a *holy personage*. He was the son of a king of the island, who devoted himself to an ascetic life, refusing to accept of kingdoms or any other worldly possessions, although his father endeavored, by the allurements of beauty and every other imaginable gratification, to divert him from the resolution he had adopted. Every attempt to dissuade him was in vain, and the young man fled privately to this lofty mountain, where, in the observance of celibacy and strict abstinence, he at length terminated his mortal career."* By the "holy personage" here described is meant Buddha, who, amongst other appellations, is commonly known by that of *Saka* or *Sayka-muni*, signifying "the astute sage." To this name, corrupted into *Sagomon*, Marco Polo has added the name *barchau*, or "deity," and there is little reason to doubt that Buddha was recognised by the people of Ceylon in Marco Polo's time under the epithets *Saka-muni-barchau*. Knox, who resided many years in Ceylon, says, "there is another great

* *Travels*, Marsden's translation, p. 669.

god whom they call Buddou, unto whom the salvation of souls belongs. Him they believe once to have come upon the earth. He departed from the earth from the top of the highest mountain in the island, called Pico Adam, where there is an impression like a foot which they say is his."* It is generally believed that there exists upon the top of Adam's Peak a carved stone, called an impression of the foot of Buddha, in some respects similar to those in the kingdoms of Ava and Siam.† Hence, it appears that what the Mohammedans believe respecting Adam, is, by the Ceylonese, attributed to Buddha. This is confirmed by what Mr. Duncan says, in his historical remarks on the coast of Malabar,‡ speaking of the conversion of a king of that country, during the life-time of Mohammed, that "it was effected by a company of dervises from Arabia, who touched at Crungloor or Cranganore (then the seat of government in Malabar) on their voyage to visit *the footstep of Adam*, on that mountain in Ceylon which mariners distinguish by the name of Adam's Peak. This "footstep of Adam" is, under the name of Sreepud, or the Holy Foot, *equally reverenced and resorted to by the Hindoos.*" §

Before entering upon the subject of the Kappooism, or demon worship, and the Bali, or planetary incantations, of Ceylon, it will be advisable to notice the introduction of Buddhism into the island, and also to take a brief review of the political history of the people, and in so doing we shall not trouble ourselves about the peculiar tenets of Buddhism further than may be necessary to elucidate the subject. As for the enormous

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* *Relation of Ceylon*, p. 72.

† "Ils ont des idoles de differentes figures, mais il y en à une qui est au-dessus de toutes les autres, qu'ils appellant *Budu*, pour laquelle ils ont une très grande vénération. Ils la représentent sous la figure d'un homme, mais d'une taille gigantesque. Ils tiennent, par tradition, que cette homme à demeuré long temps dans l'île de Ceylan, et qu'il à mené une vie très pénitente et très sainte."—Ribeyro's *Histoire de l'île de Ceylan*, p. 112.

‡ *Asiatic Researches*, vol. v. p. 9.

§ The Buddhist tradition respecting the printing of the mark of the foot on Adam's Peak is given in full in the *Raja-Ratnacari*, chap. i; see Upham's translation, vol. ii.

antiquity claimed for the manifestation of Buddha, it may be treated with silence. According to the Pitakattaya, these periods—termed *abuddhotpado*—are of preposterous length ; but during one of these periods not only does the religion of each preceding Budho become extinct, but the recollection and record of all preceding events are also lost.* According, then, to the creed of the Buddhists, all remote historical data, whether sacred or profane, anterior to the advent of Gotamo, are based on his revelation. They are involved in absurdity as unbounded as that in which Hindoo literature is involved.†

Gotamo Buddha, by whom the whole of the Buddhist historical data prior to his advent were revealed, entered upon his divine mission B.C. 588, in the fifteenth year of the reign of Bimbisáro, sovereign of Magadha, who became a convert to Buddhism, and he died B.C. 543, in the eighth year of the reign of Ajatasatto, the son of the preceding monarch. The revelations he uttered are said to have been orally pronounced in the Pali language, and orally perpetuated for upwards of four centuries, until the close of the Buddhistical age of inspiration. They compose the "Pitakattaya," or three Pitahas, which now form the Buddhistical scriptures, divided into the Winéyo, the Ahhidhammo, and the Sutto-pitaks. At the demise of Gotamo, Mahakassapo was the hierarch of the Buddhistical church, in which a schism arose, even before the funeral obsequies of Buddha had terminated. For the suppression of this schism and for asserting the authenticity of the Pitakattaya, the first Dhammasaugiti, or convocation on religion, was held at Rajagaha, the capital of Ajatasatto, in B.C. 543. The schism was suppressed, and the authenticity of the Pitakattaya in Pali was vindicated and established. Upon that occasion dissertations or commentaries, called Atthakatha, on the Pitakattaya, were also delivered.

In 309 B.C., in the eighteenth year of the reign of Dhammasoko, the supreme sovereign of India, who was then a convert to Buddhism, the third convocation was held at Patilipura.

* Turnour's *Mahâwanso*. Introd., p. xxviii. † Ibid.

These convocations are mentioned in the Mahâwanso. In 307 B.C., the théro Mahindo, son of the emperor Dhammosoko, embarked on his mission for the conversion of Ceylon. By him the reigning sovereign of the island, Demananpiyatisso was converted to Buddhism, and several members of his family were ordained priests. Many temples were founded by this monarch in the island, of which that of Anurâdhapura was the principal, and Mahindo was made high priest. Under his control fraternities were formed for all these religious institutions. The order of inheritance to these establishments was then settled, and has been uninterruptedly kept up ever since. Mahindo brought to Ceylon the Pitakattaya in Pali, and the Atthakatha in Cingalese, together with additional Atthakatha of his own. His disciples and his successors continued to propound them orally until the age of inspiration passed away, which took place in Ceylon between 104 B.C. and 76 B.C. This is recorded in the thirty-third chapter of the Mahâwanso. Between the years A.D. 410 and 432 Buddhagoso translated the Cingalese Atthakatha also into Pali.* This Pali version is that now extant in Ceylon, and it is identically the same with the Siamese and the Burmese versions.

The contents of these books may be classed under four heads, viz.: 1. The history of that undefined period of antiquity which preceded the advent of the last twenty-four Buddhos. 2. The history of the last twenty-four Buddhos, who appeared during the last twelve Buddhistical regenerations of the world. 3. The history from the last creation of the world, containing the genealogy of the kings of India, and terminating in B.C. 543. 4. The history from B.C. 543 to the age of Buddhagoso, between A.D. 410 and 432. With these annals, and while various Cingalese historical works were still extant, Mahanámo Théro composed the first part of the Mahâwanso. It extends to the thirty seventh chapter. He also composed a Tika or abridged commentary on his work. The title "Mahâwanso" is the abbreviation of "Mahantananwanso," signifying

* *Mahâwanso*, chap. xxxvii. p. 250.

"the genealogy of the great." It relates the history of the great monarchs of Ceylon, and the three visits of Buddha to that island, the arrival of the relics (the bones of Buddha) and of the Bo-tree, the histories of the convocations and of the schisms of the Théros, the introduction of the religion of Buddha into the island, and the settlement and pedigree of the sovereign.* It contains a list of the twelve *kapps* or regenerations of the world, and of the transformations which Gotamo has undergone. He is the Buddho of the present system and Metteyyo is yet to appear. With regard to the places mentioned in the poem, Mr. Turnour says:

"Mahiyangano, the spot on which Buddha alighted on his first visit to Ceylon, is the present post of Bintenne, where the dagoba completed by Dutthagamini still stands. Selasumano, or Sumanahúto, is Adam's Peak. The position of Nagadipo, the scene of Buddho's second visit, I am not able to identify. It is indicated to have been on the north-western coast of the island. The alleged impression of Buddho's foot on Adam's Peak, the dagoba constructed at Kalyani, near Colombo, as well as the several dagobas built at Anurâdhapura and at Dhigawapi, and the Bo-tree subsequently planted at Anurâdhapura, together with the numerous inscriptions—the more modern of which alone have yet been deciphered—are all still surviving and unobliterated evidences confirmatory of Gotamo's three visits to Ceylon."†

Koeppen appears to differ from other writers on the subject of the period of the introduction of Buddhism into Ceylon. He refers it to the middle of the third century before Christ, and says that it was introduced by Mahendra, the son of the great conqueror and sovereign of all India, Asoka.‡ Thenceforward, he says, Ceylon received Buddhism, where it has ever since been observed, uninterruptedly, at the same time with Cashmere and Cabul. Other missionaries went into the countries south of the Himalayas, in the Deccau, and especially among the Mahrattas, among whom were to be found, in the seventh century after Christ, very wealthy convents and

* *Mahâwanso.* Introduction. † *Ibid.*

‡ *Religion des Buddha*, p. 197. "So ist der Buddhismus durch Açôkas Bestrebungen zur herrschenden ... Endlich ward Açôkas Sohn Mahendra dazu auserschen nebst vier gefährten in dem gesegneten Eilande Lanka (Ceylon) die Segensreiche Religion des grossen Siegsrs zu verkünden."

other buildings. Through the wide-spreading of the system was the division of the Buddhist church into north and south brought about. Since that time Ceylon has been the metropolis of the south.* Whatever difficulties might have been encountered in the introduction of Buddhism into the island, a striking change ensued after its establishment. When Gotamo first visited Ceylon, the island was inhabited by savage tribes who worshipped serpents and demons. He subdued these people, and from that time the Cingalese entered on a career of national improvement which was remarkable. Under his successors they founded cities and built temples, and, above all, formed immense lakes for facilitating the operations of agriculture. These extraordinary excavations rivalled the most remarkable labors of antiquity, and were hardly surpassed by the kindred wonders of Egypt.† The remains of these national monuments demonstrate an amount of population and a state of prosperity infinitely superior to what exists at present, or has for a long period existed, in Ceylon.

Not less striking than these lakes are the vast mounds, temples, and mausoleums, which are generally adjacent to their borders, and the remains of which at the present day attest the former splendor of the state. Little or nothing was known, until recently, in Europe, of the real character and extent of the remains of one of the most celebrated of the Buddhist temples in Ceylon, that of Ruanwelly, in Anurâdhapura, whither the famous Bo—or, as Mr. Upham has it, Bogaha—tree, was transplanted, and where it still exists. When Captain Chapman, of the Royal Engineers, visited these ruins in 1828, the guides directed his attention to one curiosity in particular, although they were unable to give any account of the origin of the reverence in which it was held. They called it "the hole of the cobra de capella;" but little information was to be gained from the natives on the spot as to its history.

* Koeppen's *Die Lâmaische Hierarchie*, p. 11.

† Upham's *The Mahâwanso, the Raja-Ratnacari, and the Raja-Vali. Introd.*, p. xxii.

The mystery has been since cleared up by the translation the Mahâwanso, in which poem is related the story of t consecration of the temple at Ruanwelly, by the great ki Datugomeni, and the combat between the priest Sounutt and the king of the snakes; on this occasion Sounuttra ascen from the abode of the cobra de capella in the centre of t earth, having with him the relics of Buddha. The narrative evidently typical of the conflict between Buddhism and t original snake worship in Ceylon.*

The Mahâwanso contains much historical informati respecting Ceylon, although it is encumbered with verbo and obscure legends and tales of enchantment. But it w in this guise that much of the knowledge of the orientals w concealed from the common people; the true interpretati of these narratives being known only to the priests. T work called the "Raja-Ratnacari," the second of the sacr books of Ceylon, contains the history of Buddha, as record by Mihidu-Maha, a priest, who went from India to the island "Before the coming of Buddha," says this author, "and b fore his religion was promulgated, the island was an abode the devils, but when his religion was preached and followed became an abode of men; and this book proceeds to show ho the devils were banished from the same. Some Budhus, wh undertook that service, although they in person did not lea Jambu-Dwipa (India), yet, by their power, they expelled th devils from Ceylon, as the influences and rays of the sun pe vade the deepest recesses; but other Budhus came in perso to cast out the fiends, and to make the island of Ceylon habitation for men, by depositing in consecrated places th dawtoo (datu) or bones of Budhu, and the branch which grow in the right side of the tree called Bogaha, by which mean the island of Ceylon became a grand magazine of the mo precious things, viz.: the said dawtoo, the said Bogaha tre and the religion of Budhu; and hence it follows that thi

* *The Mahâwanso*, (Upham,) vol. i. pp. 178–183.

† Upham's translation.

island can never be governed by a king who is not of Budhu's religion; and should it happen that a king of a different religion should ascend the throne by force, he would soon be driven from the rule by the same virtue by which the devils were expelled." Mihidu-Maha lived before the Portuguese conquered Ceylon, or he would hardly have ventured upon such a prophecy. The kings of Portugal, Holland, and England, all of them Christians, have in turn ascended the throne of Ceylon by force, for the last three hundred and fifty years, yet the "virtue" which expelled the devils has as yet been unable to expel them!

The third of the sacred books, the "Rajavali," professes to relate "how the world was formed and consists," and gives a history of the kings of Ceylon from the earliest period to the conquest of the island by the Portuguese and the expulsion of the latter by the Dutch. It is full of the most absurd exaggerations, and appears to contain very little that is credible. For instance, the author states that "there were eighty-four thousand kings who had the title of Maha-Dewe, all of whom, on seeing the hairs of their head become white, went and remained in the wilderness as hermits, and afterwards transmigrated into the world or heaven called Brahma-Seka; each of the said kings reigned three hundred and thirty-seven thousand years."* There is but little profit to be derived from the perusal of such records.

In Ceylon the demon faith is an established system. It is based upon the dual principle, one set of demons being looked upon as beneficent, the other as malignant. It is identical with the primitive demon scheme prevalent throughout the pagan world in the earliest ages, and antecedent to the knowledge of a grand adversary to God and man. The system of Zoroaster was similar; the universe, according to him, being under the influence of the good demons under the leadership of Harmuzd, the principle of light, and of the evil demons under that of Ahriman, the principle of darkness. In Buddh-

* *Rajavali*, Upham's translation, vol. ii. p. 154.

ism there are beings superior to men, to whom are ascribed rule and dominion over the planets, while the latter influence the destiny of man. They pervade earth, air, fire, and water, and can use them at will. The demon worship of Ceylon has its favorite gods and pays them adoration; it supports their priests or servants, and encourages long and tedious pilgrimages to their sacred high places, and to the chief spots of the dewales. These dewales exactly resemble the thatched houses for the demon worship of Africa. Several are sometimes found together. Among the African tribe of the Bagoes, in the town of Debora, on the river Pongas, there are houses for the worship of the devil, or of departed spirits, and in them are images of devils, to which the people offer sacrifices. This house of spirits, or devil's house, which is found in every town, consists of a small hut, three or four feet high, raised on posts, and thatched with straw. Such, too, are the Cingalese devils' houses. The representations of these beings are perfectly hideous. Every misfortune and disease has its presiding demon, and monsters are represented with terrifying forms inflicting torments upon the human race; and yet these beings are, in some respects, made servants to the Budha.*

The Kappoerales, or priests of these demon temples, though by no means respectable for rank or learning, possess unbounded influence over the lower classes of Cingalese. They are devoted to the study of astrology, and the people have recourse to them on every occasion. When a child is born they announce the planet under which the event has occurred, and the baneful or the genial influence which it exercises. The Cingalese, who are attached to this system, invariably step aside when passing a dewale, to make their profound obeisance to the image which represents the presiding demon of the spot, and to deposit an offering according to their ability, without which they would be tormented by apprehension of some calamity befalling them. It appears to be a matter of doubt how far the doctrines of Gotamo sustain th

* Upham's *History and Doctrine of Buddhism in Ceylon*, p. 129

demon system. According to some of its votaries, demons or devils are men who have fallen off from their original felicity; some say they are fallen angels or gods, who have been created or have existed from all eternity. They generally believe, however, that devils who commit deeper sins than those which they suffer for already are condemned to greater torments, and that even condemned men are reckoned amongst the infernal demons; but, on the other hand, the devils *who die, and are born again as men*, and who commit no more sin, can come to the state of felicity; consequently, angels are found who are superior and inferior in rank, in proportion to the sins committed by, but not imputed to, them.*

It will be observed that the doctrine of the transmigration of souls plays a prominent part in this belief, as does also that of the different stages of existence and the different degrees of happiness or misery through which the soul of man passes. It is a strange mixture of angels and devils, and of the reciprocal conversion of the one into the other. Mr. Upham describes it as "a rotary scheme," but in this, it appears to us, he is inaccurate. Those offenders who have been the most impious are declared to be capable of repentance, and of thereby ameliorating their condition; whence he argues that they must necessarily do so, and that they are all the while progressing or retrograding, and revolving in a prescribed circle. Certainly we have not met with any portion of the Buddhist scriptures which lays down such a doctrine, though we are willing to defer to so competent an authority as Mr. Upham. That he is not infallible, however, or, at all events, that his *dicta* are open to question, may be seen from the comments of Mr. Turnour on his translation of the sacred books of Ceylon, wherein several errors are pointed out.† Moreover, he himself brings forward an exception to this rotary scheme in the case of the inhabitants of the region called Jugandere, who do not appear ostensibly to progress onward to the regions of the

* Upham's *History*, etc., p. 129, n.

† *The Mahâwanso*. Introd., pp. v–ix.

Brahma Laka, or to drop down into the regions of humanity. They are demons, so far as their malignity and the power of inflicting disease and calamity can merit the term, and they seem to be permitted to exercise at will those odious qualities, without, apparently, being in danger of the forfeiture of their station and great power.*

The uncertainty of the doctrines of Gotamo on these and other points seem to confirm the belief that his was a reforming scheme, which was obliged to bend to circumstances, and to incorporate parts of other systems. The Buddha books and doctrine seemingly display marks of at least three essentially different doctrines respecting demons. The serpent and demon gods clearly belong to the ancient primitive idolatry. The doctrines of heaven and hell are older far than Gotamo but his theory of metempsychosis, or the transmigration of souls, seems to have been devised to include both. Thus among the devils which figure in his system are the divine snakes and magic giants of Ceylon, who are said to have been frightened by the miracles he wrought, and so he was enabled to banish them or place them in the sphere of the elements in the Jugandere mountains and caves, which is an allegorical representation of his triumph over the snake and demon worshippers. The devils of the island and the subjects of the Bali, or magical incantations and songs, are also included in the six classes of the demons of Buddhism. The system is strangely contradictory, for it evidently denounces the worship of demons, but expressly encourages dewales, and prescribes the service; moreover, Buddha himself countenanced one of these gods, named Samana-dewa, by the delivery of his seat of power and sacred tree, in order to reclaim thereby the Nâgas, or serpent worshippers, to his faith.†

This Samana-dewa was probably a native prince of the Nâgas, and the whole story is evidently a mystical narrative having reference to a contest, at some remote period, between the Nâga princes of the island for supremacy. It is related

* *History*, p. 129. † *Ibid*, p. 130.

hat he was converted by Buddha on the first arrival of the ıtter at Mayhamgany. Buddha, on his second visit, gave eylon to Samana-dewa, and also a handful of his hair, which amana-dewa locked up in a chest (a *minny phalange*), with recious stones. This chest was a mystic seat, and elevated s possessor above regal authority. It would support none ut the rightful Buddha, or his lawful representatives, and it ossessed the virtue of enlarging or contracting its dimensions, s their number required. Samana buried this chest beneath ıe tree called kirri-palol, also kinni-nâga, and raja-tenai, pon the mountain Adam's Peak, for the purpose of offering ıpplication thereon, that the *nâgas*, or snakes, might obtain lessedness, and be converted to Buddhism. This *minny halange* is the stony seat below this tree whereon Buddha at down, leaned against the tree, preached, and communiated the virtues of his body. The divine nâgas are of ıighty power, and the divine snake, who invited Buddha the hird time to Ceylon, have great power and happiness. In his allegory we have evidence of a compromise between Gotamo and the native princes, which thus assumes a religious orm ; Gotamo being exalted as the supreme potentate, while he native princes (snakes or snake worshippers) have also ıuthority, but are subordinate.

In addition to the modes of propitiating demons in use ımong the Cingalese, we must notice that method of averting evil influences or of obtaining the favor of good influences, known as the bali. Sidereal influences are considered all-powerful and influential on the health or sickness of man. Planet influence is styled Bal-lee-ah. The bali are usually figures in relief, sometimes as large as the human form, representing the planets whose influence is to be propitiated or averted ; they are neatly formed with clay on a frame of split bamboo, and when painted they have an imposing appearance, particularly when lighted up at night by lamps, and also by flambeaus of the branches of cocoa-nut trees. Such frames may frequently be seen, especially in time of sickness, with

the worshippers and dancers before them, accompanied by shouting and beating of tom-toms. After the ceremonies are over the frame is partly broken up or left to be destroyed by the weather, or in any other way. Each planet has its bali, hence there are nine kinds of bali. The nine planets are the Sun, Venus, Mars, Eclipse, Saturn, Moon, Mercury, Jupiter, and Ketu. When a person is taken sick and seeks relief by the bali, the first thing to be done is to ascertain under what planet he was born, and then to make the bali belonging to it. If his planet was not written down at the time of his birth, he must have recourse to a special bali reserved for such persons. Each bali has its allotted number of figures and songs; these vary considerably; thus, for the first bali, that of the Sun, there are fourteen songs, while for that of the second, Venus, there are only two.*

Each bali has the same offering. It consists of two cocoa-nut flowers in two pots; boiled rice; seven sorts of vegetable curry; one roasted hupper; a cocoa-nut; lime; a sort of leaves called Tolle-boo-hirrese; raw rice; also, on a small chair, covered with a white cloth, stand two areka-nut flowers, some red flowers, betel-nuts, and white sandal-wood. Every bali is accompanied by four figures called Maha-dasawe, Kale-tjahre, Allootre, and Tjandere-asteke. As there are four gods of healing, each of whom is associated with the magic and ophite portion of the system, and also four classes of beings superior to man invested with the unlimited powers of the metempsychosis in the region of Jugandere, so there are four rulers of the bali named as before. In the bali we recognise the fragments of the ancient idolatry, intermixing itself with the tenets of Buddhism, and retaining to the present day its hold on the minds of the natives of Ceylon; more especially as connecting itself with the planetary system, incantations, and the magic ceremonies performed for the heavenly host and demons. The bali consist of magical ceremonies to the demons, as well as invocations to the planetary bodies.

* Upham's *History*, chap. x.

Their outlines, scope, and meaning are quite unknown, excepting that they consist of idolatrous practices and invocations; yet something of their elements may be traced by endeavoring to compare the personal character of the figures with that has already been ascertained of the gods of the superior regions in this singular system. Those curious illustrations of magical incantations are all to be traced in unison with symbols and emblems, which show that their region is in the Sugandere, and their chief agents are its enchanters, giants, and Satidical genii, or in the abode of the demons. The centre form of each bali denotes to which class the bali more especially belongs. It is stated that these incantations and invocations universally influence every class of Cingalese society and in every imaginable contingency.*

The incantation over a sick person is performed by the Kappooa of the neighborhood. He acts the part of the devil, and is dressed in a garment of dried grass or rushes, which reaches to the ground; his arms and feet are concealed; a white cloth covers his shoulders; round his head, and tied under his chin, are two or three cotton handkerchiefs; the face is blackened; two large teeth are made to project beyond the lips; a row of coarse shells is bound over the eyes; and on the head is a red cap four or five feet high, surmounted by a plume of feathers. The sick person is placed in a maduwa, or hut, made of coarse clay, and adorned in front with cocoa-nut leaves and a number of lamps, for the ceremony is performed at night. In front of it is placed a clay image of a demon on a frame; and before the image is laid the sick person, with a wicker basket at his feet. Beneath this basket is a black fowl, which must be slaughtered at daybreak, and its blood must be sprinkled on the image. The kappooa dances before the place with hollow bangles on his arms, filled with stones or some metallic substance, to make a jingle. In his hands he holds two vessels filled with perfumes and somewhat resembling an hour-glass. While he dances he sings an incan-

* Upham's *History*, etc., p. 120.

tation in a shrill tone of voice, and this ceremonial is carried on during the night until daybreak, when the fowl is killed. This hideous mummery is also performed before a new house is occupied, lest the demons should injure the inhabitants; and after the birth of an infant. On the latter occasion, a charm is engraved on a thin plate of lead, and given to the parents; this is considered a secure defence against demons. Such is the substance of an account given of these ceremonies by a highly intelligent eyewitness.* He adds that the natives believe in the existence of a supreme god, who is great and good, but indifferent to the affairs of men. It is their concern to secure the favor and avert the displeasure of certain malignant spirits whom they imagine to be constantly attendant on their persons, and to be the authors of all their evils. They place great confidence in their greegrees, or amulets, and have sacred groves, trees, and huts. They occasionally strew fruits about their towns, or spread mats by the public paths, as offerings to the invisible spirits. They sometimes make prayers on the graves of their fathers, or under their sacred trees.† Whether in the astrological fancies of these orientals there is a substratum of astronomical science, derived from the study of the motions of the heavenly bodies, is a matter of considerable doubt. Mr. Upham inclines to think there is,‡ but if there had been it surely would have led to nobler results than mere incantations.

What has Christianity done to enlighten these heathens? This branch of the subject presents some very extraordinary features which are well worthy of attention. The Portuguese, who settled on the island in 1505, were the first to introduce Christianity. In that year they took possession of Colombo, but it was not until 1548 that they obtained such a footing as to enable their missionaries to commence their labors with security among the natives of the portion of the island called Jaffna. Christianity was then preached to the Cingalese

* Rev. Mr. Fox, *Missionary Register* for 1820, pp. 135, 165.

† *Ibid.* ‡ *History*, p. 125.

the south, and in 1544 it was preached to the Tamils of the north by St. Francis Xavier. He was invited to preach there by the fishermen of Manaar, of whom he baptized from 600 to 700, and it is a very remarkable fact that, notwithstanding the most cruel persecution from the native princes, and subsequently from the Dutch, that district and the adjacent boundary of the Wanny has, to the present day, been one of the strongholds of the Roman Catholics in Ceylon. It is among the Parawas, or fisher caste of the Cingalese, that the Roman Catholics have at all times been most successful. The Parawas or fishermen of Cape Comorin were the earliest proselytes of St. Francis Xavier, and they are still proud of the fact and of their having since been his faithful and abiding converts. The fishermen of Ceylon are to a great extent Roman Catholics, and they showed their devotion not long since to their church in a singular manner. In 1840 the British government abandoned the tax upon fish, by which the fishermen contributed thirty thousand dollars a year to the revenue: these men then voluntarily paid it to their church, and have continued to do so, as they formerly did to the government.* This will appear the more singular when we consider how slight a hold on the people of Ceylon Christianity has as yet taken.

It does not appear that the Portuguese succeeded in extending their Christian influence far beyond the Jaffna district. In 1614 the Dutch gained a footing on the island, and subsequently so much influence with the king of Kandy as to induce him to expel all Roman Catholics from his dominions. By this act of 1638 the Portuguese missionaries were confined to their own districts; but they so ingratiated themselves with the Cingalese that many of the latter adopted Portuguese names, which their families bear to this day.† It has, however, been doubted whether the adhesion of these people was not rather the result of political conformity than of religious conviction.‡ The Dutch, nevertheless, were not nearly so suc-

* Tennent's *Christianity in Ceylon*, p. 11, n. † *Ibid*, p. 28.

‡ "Il avait fait semblant de se convertir, *comme font tous les Chingulais*, et était demeuré idolâtre." Note of the French Editor of Ribeyro. Paris. 1701. Liv. ii. c. i. p. 200.

cessful as the Portuguese in converting the natives. After many years of zealous preaching, backed by all the political influence they possessed, their most eminent minister of the Reformed church, Baldæus, laments that there were only two or three clergymen to look after all the churches and schools, and that, as for the converts, though they were Christians in name, they still retained many of the superstitions of paganism.* This remarkable attachment to snake and demon worship crops up under all forms of superposed religion, whether Buddhism, Brahminism, Mohammedanism, or Christianity, as we shall see.

The Dutch resorted to artifice to make converts. They made proclamation that no native could aspire to the rank of modliar, or be permitted to farm land or hold office under the government, who had not first undergone the ceremony of baptism, become a member of the Protestant church, and subscribed to the doctrines contained in the Helvetic confession of faith. This had the desired effect, and numbers of Cathol Cingalese, and even Brahmins, complied with the terms. The Dutch next proceeded to enforce the attendance of native children at the schools, both males and females, and this gave rise to bitter hostility. Their system of coercion kept up merely a show of numbers, but the Cingalese remained idolaters, and some of their professed teachers, even, were devil dancers!† All this time the Roman Catholics were steadily increasing: the preaching of Father Vaz alone added thirty thousand converts to the church. He died in 1711; and in 1717 they had upwards of four hundred churches in Ceylon, while the Dutch had not one-fourth the number, notwithstanding their efforts to suppress and extinguish Catholicism.

They succeeded no better among the Buddhists and devil-dancers with their prohibitory decrees. The natives universally adhered to their idolatry, notwithstanding their profession of Christianity. Every action of the lives even of professi

* Chap. clvi. p. 811.

† Rev. Mr. Palen's *Account of the Dutch Church in Ceylon*, pp. 16, 17.

Christians was regulated by these practices. When a child was born they consulted the astrologers; when it was sick they hung charms round its neck; and even after baptism they discontinued the use of its Christian name, and a heathen name was given to it. They would undertake no work without ascertaining a lucky day for commencing; and when sick or in adversity they sent for the devil-dancer in preference to their clergy; when they died, their graves were decorated with the leaves of the tree sacred to Buddha, and cocoa-nuts and rice were piled around as food for the departed.*

The Dutch were expelled from Ceylon by the British in 1796, and it is recorded of them that, notwithstanding all their efforts to make converts, and although at one time they had as many as four hundred and twenty thousand enrolled members of their church, the religion and discipline of the Dutch Presbyterians is now almost extinct among the natives of Ceylon; but the Catholic converts have adhered with remarkable tenacity to their faith for upwards of three hundred years. There is yet one more remarkable fact to be mentioned in connection with Christianity in this extraordinary island, viz.: that among the multitude of Tamil and Cingalese converts there is not a single instance on record of a Moorman or Mohammedan who had been prevailed upon to embrace Christianity.† These Moormen are an energetic and intelligent community, and are to be found in every province in Ceylon where there is an opening for trade. They fell and export the valuable cabinet woods, and own the coasters and small craft which ply between the island and India; they are coffee-planters, weavers, and retailers of goods; but they possess no record of their own origin, nor even any tradition of the period when they arrived in Ceylon or whence they came. They have no points of identity with the Cingalese; their religion is Mohammedan, and their language that of the Tamils in the southern part of India. It has been generally supposed that they are of Arabian origin; but there is good reason to be-

* Palin's *Account*, pp. 52, 53. † Tennent's *Christianity in Ceylon*, p. 64.

lieve that they are of Persian extraction; for, as Mohammedans, they belong to the sect of the Shahis, who prevail in Persia and India, while the Arabs are Soonees; and their priests officiate in their mosques and deliver their discourses in Persian. Ceylon was conquered by the Persians in the beginning of the sixth century; and from that period to the sixteenth century the trade between India and the Red sea was monopolized by them and the Arabs.*

On the occupation of Ceylon by the British, full toleration was granted to every religion. The effect of this policy was curious. The natives soon came to regard the withdrawal of compulsion to religious conformity as evidence of indifference to religion on the part of their new rulers; and when they found they were no longer to be paid for apostacy or excluded from public offices and the ownership of land because they were not Christians, the numbers of professing Christians rapidly declined. In 1802, the nominal Protestant Christians among the Tamils of Jaffna were one hundred and thirty-six thousand. In 1806, Buchanan, who then visited Ceylon, described the Protestant religion as *extinct!* the churches in ruins! and the clergy forgotten! He found that the natives had called themselves "government Christians" formerly, but were then unable to say what religion the English professed.† The missionaries sent to Jaffna, Matura, and Galle found that Christianity was looked upon by the Cingalese as "the religion of the East India Company." Their efforts were a failure, and the natives relapsed into idolatry.‡ The government, in 1805, sold the ruined church at Point Padro; it was bought by a Hindoo and pulled down to employ the materials in the erection of a Brahminical temple.

Such were the disadvantages under which the English and the American missionaries undertook their arduous

* Tennent's *Christianity in Ceylon*, p. 35, n.

† *Christian Researches*, p. 184.

‡ Harvard's *History of the Wesleyan Mission in Ceylon*. Introd., p. lxv *et seq.*

labors at the beginning of the present century. It is not our intention to enter into a history of these labors; that has been done recently in several works of great merit. From these we glean that much remains to be done to extirpate the ancient love of astrology, snake-worship, and devil-dancing, to say nothing of Buddhism, Brahminism, and Mohammedanism, among the natives. They still venerate the sacred tooth of Buddha, which is preserved in a shrine in a small temple of elegant construction at Kandy and guarded with very great care, but partly owing to the enormous value of the jewels with which the chamber is decorated.* The Buddhists still consider their own religion and that of the Christians identical; or that the latter is supplementary to the former. A Cingalese chief observed to Mr. Tennent, "I add on your religion to steady my own, because I consider Christianity a very safe outrigger to Buddhism."†

There are difficulties to be overcome not less serious than the apathy of the Brahmins and the fiery bigotry of the Mussulmans. There are other communities in Ceylon, small but revolting, to which we have not yet alluded, viz.: that of the lepers, who have districts of their own whither they retire to conceal their mutilations from the shuddering gaze of mankind; and the repulsive one of the Gahalyas—the hereditary executioners under the Kandyan kings—a whole village of whom have from time immemorial been established on the farther banks of the Mahavillaganga, a few miles distant from Kandy, their presence being considered too polluted to be permitted within the precincts of the capital. But medical science will in time uproot the lepers, and humane laws will cause the executioners to die out. And there is evidence that changes have for a long time been going on in both Brahminism and Buddhism which can be brought forward to show that those forms of idolatry are not immutable, an argument which must in time have its weight. The Buddhists can easily be approached by the

* Tennent's *Christianity in Ceylon*, p. 238, n. † *Ibid*, p, 241.

missionaries. Mr. Lambrich, the first Church of England missionary at Cotta, recounts that he one day asked a native of Cotta of what religion he was; and the answer was, "Buddha's." "So, then, you are not a Christian?" "Oh, yes; to be sure I am; I am a Christian, and of the Reformed Dutch religion, too!"*

ART. II.—1. *Works of Canova, in Sculpture and Modelling;* engraved in Outline by HEN. MOSES, with Biographical Memoirs by COUNT CICOGNARA. 3 vols. quarto. London. 1869.

2. *Memoirs of Antonio Canova,* with Critical Analysis of his Works. By J. S. MESNES, A.M. London. 1825.

3. *Opere di Scultura e Di Plastica, di Antonio Canova* descritte da ISABELLA ALBEIZZI. Florence. 1809.

4. *Della Vita di Antonio Canova da* MELCHOIS MISSIRINI. Libra Quarto. Prato, per I. FRAT GIACHETTI. 1824.

WITH the exception of Michael Angelo, there is probably no name among the moderns more universally recognised as a master mind in the profession he pursued than that of Antonio Canova. Though the magic of his spell was of a widely different tone, and the execution of his hands was usually guided by a milder spirit; though no creation of his either takes the intellect by storm or captivates the sensibilities, his genius was none the less triumphant in his own peculiar sphere. To recognise how much the world of art owes to this mild and modest reformer, it is necessary that we take a glance backwards and see what was the state of art at, and immediately preceding, the period when he first began to exercise an influence on the taste of his patrons or the judgment of connoisseurs; to lead the informal school of followers which grew up around him, and to give to the world not only visible and tangible examples of an improved practice, but

* Selkirk's *Recollections of Ceylon*, p. 312.

a well-based scientific theory, by which the genius of others might be safely guided in the true principles of art.

During the fifteenth and sixteenth centuries, sculpture and architecture had been chiefly used to subserve grave national purposes, but in the latter portion of this period the tendency had grown towards ostentatious display; while in the seventeenth, grandeur of style was almost entirely lost in pettiness and affectation. From the middle to nearly the close of the seventeenth century peace reigned in Italy; but it was the peace of apathy, not of prosperity. The spirit of progress appeared dead; the arts languished, and for fifty years preceding the birth of Canova we can find no trace of the execution of any large monument of superior design, or any single group of sculpture, which has attained extended or enduring fame. Passably good artists there were, but the whole spirit of what was called art was infected with either a timid, conventional mannerism, or debauched by a false theory or ignoble sentiment. The best sculptors were, and claimed to be, but imitators. Originality and truth to nature had neither exemplars nor admirers.

Such was the atmosphere into which Antonio Canova was born November 1, 1757. And we may almost say that as soon as he was born he began to work; at such a truly infantile age were the pencil and the chisel placed in his hands. It was in the Venetian territory, in the little village of Possagno, between the Alps and the Adriatic, that the humble family of the Canovas resided, as had their ancestry for a long but untraced period. The father, Pietro, died when the little Antonio was only three years of age, and his mother soon re-marrying, he was left to the care of grandparents to be reared. Here we trace some signs of hereditary talent. Pasino Canova, the grandfather, is called by the English author Mesnes, and other biographers, a "stone-cutter," but he was evidently something more than that, as specimens of his work as a sculptor, and on altar-pieces, still remain to testify in Posagno and the neighboring villages of the vicinity.

The fact that the Canovas were poor has been regarded by the admirers of the great sculptor as a very unfortunate circumstance; but the reverse we think may be shown; for at an age when most children remain in the care of nurses, or are left to their own amusements, the grandfather of little Antonio put a pencil in his hand, encouraged him to control the command of that, in the exercise of drawing from set lessons then taught him to make small models in clay, and from that to use the chisel with skill and dexterity; so that in his ninth year the boy completed two small shrines of Carrara marble, one of which was inlaid with colored stones so well executed that they were placed in the country villa of the patrician Falier, near Possagno, where they are still preserved.

Thus, partly from the poverty of the old man as well as from the hopes he entertained of the talents of his grandson Antonio was from his earliest years habituated to the practice of the art which was one day to render him famous. Though in an obscure position, with few external incitements to study, Canova at least grew up amid surroundings congenial to his tastes and to the development of his talent. He is represented by his friend in after life, the Count Cicognara, as of a docile and studious temperament; having as little inclination as time to indulge in the sports of boys natural to his age; he thus soon attained all the mysteries of the sculptor's art, so far as his native village could supply them. He had not however been restricted to the paternal cottage workshop; in the villa d' Asolo, occupied during the summer months by the Signor Giovanni Falier, a senator of Venice, and in the company and friendship of the latter's son, he passed many pleasant days, amid scenes and surroundings which assisted in cultivating his taste and inciting his ambition. It was in connection with this patrician household that the story of the "butter-lion" is told of Canova, to the purport that, on one occasion, some ornament ordered for the signor's table having failed to be presented in time for a party assembled that the lad Anonio, seeing the anxiety of the servants, call-

for some butter, and therewith moulded a lion of such true and noble proportions as to excite the astonishment of the signor and his guests.*

This incident, though constantly repeated, is discredited by some biographers from lack of positive proof, but all the probabilities are in its favor, as the lad was not an absolute novice in modelling, and was a frequent visitor at the villa d' Asolo; and we may readily imagine that something less than absolute perfection would please under such circumstances. It is observable, also, that Canova, in his maturer years, was partial to the introduction of lions in his monuments and relevios. It is certain that Falier's influence placed Antonio under the instruction of his first regular master.

Passing from the tutleage of old Pasino at the age of twelve, he was placed in the studio of Bernardi, known better by filiation as Toretto, in the villa di Pagnano, not far from Asolo. He was an artist of repute from Venice, and only temporarily located in the vicinity, being employed to furnish certain embellishments to the Falierian mansion. It was in this studio, only a few days after his entrance as a student, and during the absence of his master, that Canova executed the models of two angels, the marble copies of which were afterwards placed on the high altar of the church at Montfumo. These were regarded at the time by Toretto as evincing not only uncommon but really extraordinary skill, considering the age and limited means of improvement which his pupil had hitherto enjoyed.†

With Toretto, Antonio continued two years, principally employed, for his master's benefit, in the use of the chisel, but seizing every opportunity, in over hours or when other favorable occasions occurred, to draw designs and subsequently to model them in clay. His progress in all that this master could teach was rapid and steady. From the promise which Toretto perceived in him, he not only spoke highly of him to

* *Vita di Canova*, Missirini, p. 42.

† *Biografia Italiani illustri*. Tipaldo.

his patron Falier, but graciously gave him permission to us his own name; a favor which the artists of Italy were accus tomed to bestow upon their favorite pupils, and a practice whic has caused no little confusion in fixing the authorship of man works. Canova, however, never found occasion to avail him self of the permission so kindly intended. As may be judge from the above incident, the best feelings existed betwen pup and master. But if the latter was satisfied, the former wa not. Canova yearned for a wider field. Those indefinabl feelings of mingled hope and desire, of doubts and aspirations alternating with seasons of depression amounting almost t despair, combined with a temperament of keenest sensibility while the subject is limited in action by poverty and depend ence, form a state of mind which has been shared witl Canova by many other sons of genius in his own and othe professions.

We have dwelt upon these early scenes not so much fo their intrinsic interest as for the purpose of showing wha were the foundation stones of Canova's eminence. These were first, hereditary taste; secondly, a kind and genial, not forced induction into the practical exercises of his art; and thirdly, conscientious performance, on his own part, of all his allotte tasks, with the ambition superadded to do more and bette than his master set before him.

Toretto having completed his engagement at Pagnano prepared to return to Venice, to which city it was no part o his agreement to take Canova. But previous to his depart ure, he had so highly commended the talents of his pupil t the Signor Falier, that when that senator returned to Venice, as was his custom for the winter, he invited Antonio to the Falier Palace, and bade him consider it as his home.* At this time the young artist was not fifteen, and so suddenly trans ferred from his obscure native village to the attractions of the Venetian capital, as the favored *protégé* of one of its honored patricians, it would not have been strange if the lad had

* *Archives litteraires.*

given away, at least for a season, to some of the novel enchantments of that "city on the sea." But nothing was further from his intention than to spend his time in self-indulgence or amusement. His master Toretto had died shortly after his return to Venice, so that the boy was now left to his own discretion as to the course he should pursue. Quickly was his determination made. His first thought was how he might best advance himself in his art, and coequal with that desire was the wish to find some intermediate employment by which he might measurably free himself from entire dependence on his generous patron.

Seeking out a grand-nephew of his late master, Guiseppa* Ferrari, also surnamed Toretto, a sculptor of some merit, he made an engagement with him to work for a small remuneration during the hours of each afternoon, while he determined to employ his mornings in attendance at the Academy of St. Lucca, and in drawing from the many fine designs and pictures in the gallery of the Farsetti Palace,† the munificent owner of which freely threw open his collection for the benefit of students and others. It was in this gallery that his studious habits and strict attention to instruction attracted the attention of the famous Prof. Mingard, who gave him his first lessons in painting.‡ His days thus usefully and honorably filled, his evenings were spent as a permanent guest in the home of his patron, amid a circle in which was represented all that there was of literary, scientific, and artistic merit in the Venice of that day; nor were eminent statesmen and ecclesiastics wanting to give breadth and variety to the topics there discussed. This of itself was no unimportant advantage to a young man of quick intelligence and receptive sensibilities like Canova.

Up to this time, the works which he had produced, apart from that which he did for his employer, consisted mostly of

* Some authorities say it was a brother of the above, Giovani, but the preponderance of evidence is in favor of Guiseppa. *Vide* Mernes, p. 194.

† Now known as the *Hotel della Gran Brittagana* at Venice.

‡ *L' Univers pittoresque.*

trifles, more or less excellent, which he designed and used as presents to his friends; these, though interesting as *primizie*, and showing the certain steps of steady progress in his profession, and sufficiently good to assure his patron and friends that their faith in him was not misplaced, were still not of that perfect quality to be valuable in any other sense than as containing the promise of power, as yet awaiting development. This power was within him, but the instruction of that day proved better adapted to cramping any effort at originality than fostering it. We must expect nothing showing marks of absolute genius till the neophyte cuts loose from his teacher

One quality of mind which remained a characteristic through life, was equally noticeable at this early period. He could hear praise not only without injury, but with no other feeling than an increased desire to still better merit it. The Signor Farsetti, having watched Antonio closely, and being convinced of his superior abilities, besides having become personally attached to him through observing his amiable deportment, determined to test the quality of his favorite by a special commission. The subject selected was one calculated to interest the feelings, as well as to try the practical efficiency of the artist, though affording no great scope for originality. This was a group of Orpheus and Eurydice. The particular moment in their affecting history selected for portrayal was that crucial instant when Orpheus, forgetful of his compact with the infernal deity, looks back, only to perceive his long-sought wife a second time lost to his embrace.

Canova had now left his second master, with whom he remained but one year, probably feeling that he could learn nothing from him; he was thus free to use his time as he pleased, and we may readily conceive, as indeed his own pen in after life described,* the pleasure with which he commenced for the first time to create the human figure of *life* size, under the stimulus of a commission from a loved *and*

* *Vide* letter to Falier, dated Roma, 28 Agusta, 1784.

honored friend. His need of a studio was kindly supplied by the monks of St. Stephens, who offered him the use of one of their vacant cells for a workshop.*

Nearly a year's labor was expended on the statue of Eurydice; this work involved one difficulty not easily overcome in stone—marble was not used in this group, but a soft native stone known as *pietra di costosa.* Eurydice is supposed to be leaving the mouth of hell; hence flames and smoke are behind and partially around her, elements difficult to work into a natural appearance in any solid substance. The fatal moment is indicated by a body-less hand, which grasps her right arm, while the whole motion of the body, which inclines slightly to the left, and the expression of the countenance, declare that, though the effort is made to escape, yet the attempt is realized as futile. The ultimate fate of this statue is unknown. Trace of it was not lost, however, until after an engraving had been executed, which conveys a just and poetic conception in the *tout ensemble.* It pleased and was accepted by Farsetti. But it did not satisfy the artist, and he determined to delay the execution of the Orpheus until he had settled certain principles of practice which he had long revolved in his mind. From the difficulties he had experienced in working a life-size figure from a small model, then the universal custom, Canova made up his mind that it was an altogether erroneous mode of procedure. Henceforth he introduced into his practice the process which we believe is now universally followed, of working the stone only from full-sized models, the exact counterpart in every particular of what the finished work was meant to be.

Among the other corruptions into which the art of that day had fallen was the error of spontaneity. The popular opinion, to which also the artists had succumbed, was, that spontaneous production evinced more talent than careful designing and modelling; that the man who could take a piece of marble, and work it into his idea, or from it make a copy

* Cicognara's *Vita di Canova,* p. 81.

of an antique, without other model, was the genius; while he who required careful drawings and measurements, or elaborate clay modelling for his help and direction, was a mere plodder. Is it wonderful that with such false ideas of the processes of truth in art, that all sorts of falsities were perpetrated, or that meretricious adornments were abundantly used to conceal the defects of natural grace and symmetry, which inevitably resulted from such presumptuous license? That this practice was fatal to the production of perfect work, Canova had in part realized before his production of the Eurydice; though his previous efforts having been works of less dimension, the absence of counterpart modelling had not been so visibly demonstrated. From the practice which at this epoch he introduced, and ever after continued, may be justly ascribed the restoration of a purer style and a more perfect finish, of which he soon became the foremost exemplar.

The commencement of the Orpheus was postponed tha he might bend his whole mind to the discovery of those prin— ciples which had been the secret strength of that perfectio in sculpture which, in his novitiate life, was found only in th antique, and, as a collateral consequence, to seek out the caus of that degradation of art which he saw around him. Hi reflections soon led him to the truth, that nature had bee abandoned, that a servile conventionalism had bound its iro fetters upon every branch of art. That instead of studyin from the life and natural objects, the scholar had only copie from the master, and he from his predecessor; that the whol practice of the schools, almost from the days of Michae Angelo, had been one vicious circle of imitation. If th imitation had been solely from true and pure models of th best sculptors of the best days, though seriously limiting th inventive faculties, still the result would not have proved s disastrous. But a worse delusion than this had seized upo the minds of Italian sculptors.

From the popularity of Corregio in the sister art of pain— ing, a school of sculptors had arisen, of which Bernini w

the head, and Rusconi, Algardi, Moco, and others, abject followers, who strove to copy in marble the style of Corregio on canvass! The result of attempting to blend in practice arts so different in their essential principles may be imagined. The painter dealing with flat surfaces, in which it was required only to delineate one aspect of any form or figure, represented his single figure or groups with every aspect of varied color to assist in the expression, while the sculptor must finish the full, free detached form perfect on all sides, without any adventitious aid of collaterals to deceive the eye. The painter may conceal much, if his drawing is defective, by the skilful use of light and shade. The sculptor can conceal nothing. His work must be perfect, or every imperfection is patent at a glance.

Particularly in the matter of drapery did the absurdity of this vile subserviency appear in the work of the sculptor. Instead of the marble exhibiting the freedom of the limbs—the pure symmetry of the human form in repose, its beautiful or fearful energies in action, statues were fast attaining an unsightly muffled aspect, from the voluminous folds which enwrapped the whole form, while the head, a hand, and usually the feet emerged, with no outward sign of connection. We shall see hereafter in the course of this article the immense change Canova wrought in this respect. He was resolved to reform altogether in his own practice the entire usage of the schools in the matter of imitation—to revert always to the living model.

With these objects in view he not only commenced the study of anatomy, which he subsequently declared was "the secret of the sculptor's art," but even sought and obtained admittance to the dissecting room, where he practically demonstrated his theoretical acquirements on the subjects provided. He secured the services of living models, while he made drawings of every conceivable attitude which could be useful to him; while his observation seemed almost preternaturally alive to whatever of striking appearance or peculiar

posture presented itself on the pathways and canals. He watched artisans, laborers, and dancing girls, and particularly the sailors and boatmen—in fact, wherever the heroism or poetry of motion was in any way displayed. He haunted the theatres for a season, solely for the purpose of watching the different expressions of the varied passions displayed by the actors—that he might learn "*Il scolpir del cuor*"—the sculpture of the heart. He left no means untried by which he might gather new ideas or new facts for his purpose. He also continued his book studies; but realising that he could not compass all knowledge, he carefully selected those branches which bore the nearest relation to his beloved art. With such assiduity, with such singleness of purpose, such pure and unalloyed devotion to his profession, there would have been no risk in prophesying that a new art era was impending in Italy.

Three years were spent in this varied sort of preparation before his Orpheus was completed, and the very marked improvement upon the Eurydice showed that his studies had been wisely and satisfactorily directed. Brought specially into public notice, it was received with universal favor. It happened that about this time the opera of Orpheus, by Bertoni was brought out, the part of Orpheus being taken by Guadagni, and the social *furore* of Venetian life was divided between these artists, so that the regulation questions of the virtuosi as they met, were, "Have you heard Guadagni?" "Do you know Canova?" This enthusiastic reception of his work, Canova afterwards declared, "made him a sculptor." Other commissions speedily followed, and he was now in a fair way of achieving the fame he coveted. Among the most interesting works of his, which we may term the period of his novitiate, was the group of Dædalus and Icarus, to which reference will be made hereafter. Four years were spent in this way in Venice, and then, like every true artist, he began to yearn for Rome.

But how was he to make a beginning there? how to support

himself amidst the throng of artists, familiar and at home there, already known and patronized? The problem presented greater difficulties to his own than to the minds of his friends. Canova modestly underrated the interest which he had excited. His wishes being ascertained, which only coincided with the judgment of his steady and generous patrons, chief among whom he always held Signor Falier, he was at once provided with letters of introduction to the Venetian ambassador in Rome, the Cavaliere Zuliani, who subsequently became one of his most devoted friends; while Falier, with the co-operation of others, prepared and presented to the senate of Venice a petition requesting that, on account of his rare merit and the honor he was likely to do the state, a pension be granted him. This, from lack of precedence and certain technical objections, was not at once successful, but after the lapse of nearly a year a pension was granted of three hundred crowns per annum. But by his own exertions, and the support of Zuliani, he commenced a competition with the living artists of the modern Athens. Canova had the good fortune, all through his life, to secure the attachment of devoted, influential friends, as well as of those in humble spheres of life. In fact, if the accounts of his biographers may be fully trusted in this respect, there were few men more capable of exciting enduring attachment; being devoid of everything bordering on envy or jealousy. He was, though of a thoroughly independent spirit, so open to suggestion or even severe criticism, that in all noble spirits enmity was disarmed, and it was left to national prejudice or petty minds to become his detractors.

The house of the ambassador at Rome in which Canova was invited to remain, was, like that of the Signor Falier in Venice, a nucleus around which gathered the best minds of the city. Desirous of worthily introducing Canova to his brother artists and the literati then residing in Rome, the Cavaliere Zuliani had sent for the *chef-d'œuvre* of his young friend's Venetian labors, the group of Dædalus and Icarus, that he might exhibit it to the best artistic judges of that time

and place. There were present such men as the critic Aristarchus, the engraver Volpato, Battoni, painter, Cadef, sculptor, Gavin Hamilton, Pucinini, and many others of equal taste and judgment. The group thus brought under so severe a test consists of two figures only; the smaller, Icarus, being raised nearly to an equal height with his parent by being placed on a slightly elevated mound of earth, with his left side toward Dædalus, while the old man bends forward in the act of adjusting the wing on the right arm of the youth. The general handling of the subject is decidedly good, though fault has been found by some critics with the lack of precision in the lines of the figure of the youth, which are certainly not particularly striking. But in the face and attitude of Dædalus there is the character to the life; his trembling hands seem to betray in their nervous action a dread of disaster as the result of the experiment about to be tried, while in the furrowed countenance are seen those mingled feelings of hope and fear which would naturally beset a parent at such a moment.

For a while the group of guests stood in silent astonishment quite unprepared as they were to see a work of such merit from the hands of a young man of twenty-three, newly arrived among them, and consequently lacking, as they thought, that culture which can only be derived from contact with the best minds and study of the best examples. Gavin Hamilton was the first to break the silence of astonishment and admiration; he approached Canova, who stood apart, awaiting with nervous anxiety the first Roman verdict on his work, and seizing his hand warmly congratulated him on his success. The token being thus given by one so highly respected among his brother artists, the praise became contagious and all joined in commendation of the group, Aristarchus truly guessing "that the forms had been taken from life"—an innovation somewhat startling to the mannerists of the period.*

Though a member of the ambassador's household, and so favorably made known to the leading artists with whom

* Missirini in *Vita*.

great portion of his future life was to be passed, Canova was still poor; ready money was not within his reach. He craved the opportunity of creating a group of heroic proportions and design, but he had not the means to procure a block of marble sufficiently large for the subject he contemplated—this was Theseus vanquishing the Minotaur. Disclosing his desire to Zuliani, the coveted block was cheerfully ordered for the expectant artist, who, with renewed hope of excelling himself, set eagerly to work designing and modelling.

We have spoken freely of the degradation of the art of the period in Italy, and though this could be scarcely exaggerated; though no master mind had taken its position in the van of progress and reform, yet symptoms of the dawn were certainly approaching; a reviving interest was awakened in the ranks of the archiologists especially, which tended to diffuse a better appreciation of truth in art by the recovery of those antique gems which have never failed, when made accessible, to instruct and delight.

The reigning King of Naples, Charles III., gave ample encouragement to an extensive system of excavations in the search for lost treasures of art, under the continual stimulus of his learned minister Tanneci. He also established an academy for the collection and illustration of antiquities at Portici; for him engravings were made of the most noteworthy objects, and, copied by other hands, were extensively circulated. Leopold of Tuscany also helped to prepare the way for the coming reform in a similar manner, by publishing plates and drawings of the famous antiquities buried as it were in the Florentine galleries and museums. At Rome the Cardinal Albini proved a munificent patron, not only of antiquaries, but of men of taste and culture in every department of the fine arts. Clement XIV., and, later, Pius VI., Cardinal Silvia, and others aided more or less in the same spirit. Writers, too, began to appear with some new thoughts and discriminating strictures on the different branches of art. Mengs, Millizia, Algarotti, Winckleman, D'Azares, the learned Hancar-

ville and Sir William Hamilton. Ottone Calderari was r[illegible]-viving taste in Vicenza, the labors of Temanzi and the bo[illegible]d designs of Flaxman all helped on the approach to a bright[illegible]r day, continual zest being given by the interesting discoveri[illegible]s making at Herculaneum. Though the most clear-seei[illegible]g among this brilliant galaxy had not grasped the very core a[illegible]d heart of reform in recognising the security of a return to t[illegible]he study of nature, there was yet, if we may so express it[illegible] a movement all along the line of intellect and taste toward t[illegible]he right direction; but without a leader of force and original[illegible]ty enough to inaugurate a clear and definite assault upon t[illegible]he fortress of falsities which stood in the way of the awake[illegible]ed and moving but not yet victorious army. The coming m[illegible]an was not revealed.

Meanwhile Canova kept steadily at work, in close sec[illegible]lu-sion laboring at his task; holding, with Sir Joshua Reynol[illegible]s,* that unfinished work should not be exhibited even to frien[illegible]s; that the artist's mind is apt to be embarrassed by premat[illegible]re and discordant suggestions; while the effect of the comple[illegible]ed work is always injured by previous familiarity with the p[illegible]ro-cesses of labor. Certain hours of each day he still devo[illegible]ted to study in the galleries and collections of ancient stat[illegible]es, with an assiduity as remarkable as praiseworthy; showing[illegible] as this did also, that no peculiar theories which he held p[illegible]re-vented him from making use of all the subordinate aids[illegible] he could find in the works of preceding artists. Though m[illegible]ost of his time was given to his Theseus, several minor wo[illegible]rks were also undertaken and carried to completion during [illegible]his period. Chief among these was an Apollo in the ac[illegible] of crowning himself. The subject would scarcely admit of [illegible]in-vention, and would demand no special notice, since so m[illegible]ny more notable works succeeded it, but for the fact tha[illegible] it opportunely furnished to Canova a competitive test of m[illegible]erit with a rival artist, claiming to be one of the best of li[illegible]ving sculptors in Rome. This was Angelini, whose Mine[illegible]rva

* See Discourse xv.

Pacifica was placed on exhibition at the same time as Canova's Apollo. The public judgment decided unhesitatingly in favor of the latter.

But a nobler triumph was at hand. The Cavaliere Zuliani was alone cognizant of the progress of the secret work on the Theseus; when all was completed, the artist prepared a model of the head which was placed in the ambassador's reception salon; many guests were invited, with the ulterior object of getting an expression of opinion upon it. Not the slightest intimation had escaped respecting the existence of the work from which it was taken. Various were the comments and earnest the discussions as to its origin, intermingled with surmises how such an undoubted antique had come into the possession of their host. All agreed that it was of Greek origin and of great excellence. Some even went so far as to try and recollect where they had seen the original; others were almost positive that they knew to what particular statue among the ancients it was to be attributed. An end was put to these amusing speclations by Zuliani exclaiming, "*Ebbene, andiamo a verderne l'originale.*" ("Come, let us go and see the original.")* The general astonishment increased; still all expected to see some ancient statue, by some good fortune recovered; when the *cavaliere* triumphantly led them on to where Canova's marble hero sate, victorious and elate, on the prostrate form of the monster;—victorious, but still showing signs of exhaustion, as if the struggle, though well and nobly ended, had been most hardly contested.

The contrast between life and death are admirably delineated in this group. The Minotaur, lying prone over a rock, exhibits in each limb and every muscle the placidity of actual death, while the body is yet warm with recent life; while the conqueror shows, not only in the way he rests upon his spear, but in the raised veins and muscular contraction of the right arm, and the suffused condition of the whole body, the extreme violence of the late contest. In the countenance likewise is a su-

* Henri de Latouche, *Œuvres de Canova*, p. 130.

preme self-consciousness of ability to overcome, if need be, other foes of equal or greater magnitude. This work sufficed to fix the fame of Canova upon a firm basis, though it was not in groups of this kind that his most distinctive qualities were displayed. The head and toes of Theseus were modelled after the antique, while the limbs are as evidently studies from life, which certainly mars the unity of the work; but the inspiration of expression obliterates all minor faults, and compels a willing or unwilling admiration.

We have, in a preceding page, referred to the reprehensible, conventional mode of treating drapery in sculpture, first in the massiveness of the folds of full-length robes employed in the concealment of the form, rather than as an aid in the embellishment of the human figure; and, secondly, in the opacity of these folds as well as in the texture of the garments. To Canova are we indebted for the modern introduction of those light, airy, guaze-like, transparent draperies in marble which give elegance of outline with just sufficient concealment to enhance the beauties of a contour they are not meant to hide. To display, in its purity and grace, not to conceal the human figure, he held to be the true mission of sculpture. Of several classes of statues and groups illustrating this idea, the best known, as being most frequently copied, are the Hebe, Psyche, Dancing Girls, and the Graces. These were all repeated by Canova's own hand for many different persons.* An Italian poet, Ippolito Pendemonte, has beautifully expressed the feelings excited by the representation of the light and buoyant joyousness of the young and beautiful Hebe who, with the slightest trace of depending drapery, which looks as if woven in celestial looms, is represented with vase and cup in either hand in the very act of stepping; the artist having seized most successfully in this creation the very life of a partly completed motion; the right foot wholly, the left partially,

* One *Hebe* is in the Casa Albruzzi at Venice; a *replica* of this was made for the Empress Josephine. An original Psyche is in the family of Sir H. Blundel, The Graces are in the palace at Monaco. A Dancing Nymph, with cymbals, was bought by the Prince Rossamoffsky of Russia.

raised ; and as we look we almost expect to see the movement consummated.

" Whither Celestial Hebe dost thou stray,
Leaving the banquet of Eternal Jove ?
Deign'st thou to change the radient fields above
To tread earth's dark and ignoble way ?
Immortal sculptor ; who dost yet outlive
Italian art, and reachest Attic grace,
Life's soft and breathing aspect thou could'st trace.
Here, sculptured motion cheats the wond'ring eye;
Back from that form on which entranced we gaze,
Her vestments seem to flutter in the wind,
Buoyant in many a graceful fold behind.
While Nature's self, whose law the world obeys,
Deceived by mimic art, *believes a stone*
With motion gifted, swiftly passing on."

In these light and graceful figures and groups the artist bestowed the greatest possible attention to details. "Perfect even to the nails," was a maxim of the Greeks, and in this degree of finish Canova practically excelled. Though especially successful with the eye, he was not unmindful of ears and nails, which he maintained had as specific a character, though different in degree ; and they were never treated by him as unimportant addenda, he claiming that, when carefully wrought, with due observance to the character of the statue, they greatly added to the effectiveness of the entire figure. The absence of care in these particulars would no doubt depreciate the *tout ensemble*, without the cause being appreciated by ordinary observers. What every one, whether artist or not, could appreciate in their works, and others hereafter to be considered, was the wonderful flesh-like finish of the skin. In this we believe Canova to have been unrivalled ; if he had stopped his work here the world would have still been indebted to him for three important reforms : the return to life models ; the restoration of the true uses of drapery in sculpture ; and the example of exquisite finish in flesh surfaces. But these were the beginnings—the minor trifles of his life work.

It is not to be supposed, though we have more especially

referred to the helps which he received, that Canova was free from those assaults of prejudice and jealousy which inevitably pursue the innovator upon established usages; all the conventionalism, all the conservatism of the age was against him many of his unsuccessful rivals were of course ready to assail the new aspirant for fame with every reproach which wit or malice could invent. Some of the most embittered, because the least successful themselves, declared him to be "*senza gusto, senza brio, e senza grazia*"* (without taste, without fire and without grace). The only reason why those indiscriminate critics have so little influence upon his life was, that he would not allow himself to be disturbed by them; taking, in the best possible part, either just or unjust criticism from whatever source it came; holding that whatever was publicly exhibited was rightly subject to whatever opinions people chose to express. Had he been friendless and unsupported, such attacks, we imagine, could not have been so patiently borne; but his undeviating rule was, never to answer any criticism except by the effort to do better. To the objection of the late Lord Bristol, that the group of the Theseus and Minotaur "was cold," his chisel replied in a group shortly after produced, of Cupid and Psyche, which very possibly proved "too warm" for his lordship, as it certainly did in the estimation of some others.

The genius of Canova was not of that sort which bursts forth in sudden flashes of brilliancy, but was of a steady and progressive order, yet not of that ordinary kind which indicates great talents only; it was true genius, for it was something which no amount of education could have produced; it was inherent in the man, and, under any circumstances, would have found some means of expression. So far as his own words explain his process, we find that he just seized an idea intellectually, not through the emotions; subsequently analysing it in all its aspects, by reflection and experimental tests he perfected it, and eventually incorporated it in some glowing

* Vide *Hist. View of Modern Sculpture.* Edinburgh, 1825.

figure, some expressive group, some immortal souvenir of the phase of thought and feeling which had filled and hallowed his soul before marble, clay, or pencil had been touched.

In consequence of the reputation attained by Canova by the production of the victorious Theseus, he was shortly after solicited to perform quite another sort of work; this was a memorial monument in honor of Clement XIV., better known in the literary world as the author of "Ganganelli Letters." But here an obstacle arose in the scruples of the artist, who was still receiving a pension from the Venetian government, and his conscience took alarm lest it should be thought dishonorable in him to accept a commission from the papal state while, as he considered himself, in the service of Venice. Yet the request was of such a nature as to excite all the ambitious feelings of the artist. He was still a young man and comparatively new to Rome; yet the Papal court had passed over the older and native artists to bestow the greatest honor they had at the time to give, on him. Indecision was no part of Canova's character. Immediately on receiving the invitation to the work, which came through his friend Volpato, and before responding to it, he started off to Venice and laid the case before the senate; which body, with a generosity and noble discrimination which did them the highest honor, cheerfully acquiesced in his acceptance of the commission, at the same time definitely releasing him from any restraint whatever upon the use of his time, conceiving it glory enough to have given an artist to Rome, of whom that city was already proud.

With grateful satisfaction Canova returned and accepted the contract, and at once commenced designing and modelling for this great work. Two years were expended in completing the model—the marble was still untouched. It was not until 1787 that it was placed in position in the church of the Holy Apostles. We cannot here do better than give our readers the description and opinion on this monument, by Milizia—not a friend hitherto, but a bitter opponent, of modern art and artists. He writes:

" A singular phenomenon, my dear Count, wherefore I write to y what a proem! In the church of the Holy Apostles, near the entr to the sacristy, and fronting down one of the side aisles, the sculp Antonio Canova, a Venetian, has erected a mausoleum to Pope Gan elli. The basement is divided into two plinths. Upon the first a beautiful female, called Meekness—meek as the lamb which repose her side. Upon the second division is the urn, over which, on the op site side, reclines Temperance, another beautiful figure. From bel rises a pedestal, supporting a sort of antique form, where, full of dig and clothed in a most becoming manner, (*papalissimamente*), is se his Holiness, with the right arm and hand extended horizontally attitude of commanding, of pacifying, of protecting. Such is monument. The whole is of white marble, except the lower basem the pedestal, and chair, which are of a greyish color (*sumacello*). harmony is delightful, the light proceeding from above, and in moder splendor, whence every part comes out with great sweetness. The c position is of that simplicity which seems facility itself, yet is the v essence of difficulty. What repose, what elegance, what dispositi The sculpture and the architecture, in the whole, as also in the det are in the style of antiquity. * * * * During the twenty years which I have passed here *in questa urbe del orbe*, I have n witnessed any work so generally applauded. Of all the production modern sculpture, this is declared by the most liberal and intellig artists to approach nearest to the antique. Even the ex-Jesuits* th selves cannot help praising and admiring this marble Ganganelli. * It is indeed a perfect work, of which were there any doubts they wo be dispelled by the very censures of the Michael Angelists, the Bernini the Borominists, who, Heaven pity them! regard as defects the grea of its beauties, exclaiming against the drapery, the forms, the expressi —as antique! Our friend Pietro Vitali is now employed upon an engr ing of this monument. I congratulate myself, then, with all the Venetia I earnestly wish that the young artists may follow the career of Can and that the fine arts may again be restored. I wish much, indeed, b hope little, etc."†

The difficulty of these pontifical monuments was grea increased from the usage, which had grown into a sort of ecc siastical etiquette, that the statues of the pope memorialis should be turned towards the chair or tribune of the temp

* The Jesuits had been expelled from Rome by this pope.

† This letter was originally addressed to the Count of Vicenza, f published by Cicognara, and subsequently among the "Lettre Medite" Gamba. The date of it is Rome, April 21, 1787.

and, to accord with this position, of course all the other figures and ornaments must be arranged. This restraint was a great source of embarrassment, but one which was successfully overcome in the monuments under consideration. In a later one, that of Clement XIII., is the figure of a mourning genius of remarkable sweetness and dignity of expression. This figure always remained a favorite of the artist; it was indeed twice wrought nearly to completion; the first statue being abandoned on account of the discovery of a slight discoloration in the marble, which did not appear till much labor had been expended upon it. The pecuniary value of the marble alone was five hundred crowns, over four hundred dollars; but no pecuniary loss could induce Canova to introduce imperfection, which there was any means in his power to remedy.

Among the numerous monumental works subsequently executed by Canova, one to the memory of the Princess Christine, married to a prince of Saxony, a daughter of Maria Theresa, at Vienna, is one of the most notable. It is pyramidal in form, and contains nine human figures of full life-size, besides a lion, a medallion with a likeness of the princess, and imaginative figures of Felicity, winged geniuses, etc. One famous group in this monument is that known as "Beneficence," composed of three figures. Beneficence, a female figure of gentle yet dignified mien, leading an old man and a child towards the tomb. In her arms Beneficence also holds an infant. The face of the old man is wonderfully expressive, as with tottering step and dimmed eye he slowly follows, gazing up to the face of his lonely guide with a faith and confidence which a no less worthy leader could inspire.

A favorite mode of memorial work which Canova subsequently made his own, was the execution of the bust of the person to be memorialized in likeness of the original; this placed on a central pedestal he would surround with natural, allegorical, or mythological figures, exemplifying the real or supposed peculiar virtues of the deceased. This gave opportunity for great variety in the designs and execution. Later,

historical relevios became a prominent product of his studio; these embrace a great variety of subjects of and styles of treatment, and like everything else of his were always first completed in full-sized models. The number of figures introduced in these was sometimes very great. The series representing scenes in the life of Socrates, introduced from fifteen to eighteen figures each. In the relevio representing the offering of the Trojan women to Minerva, twelve robed figures stand in processional line, in couples, which finely exemplify the power Canova had attained in the management of drapery. In such a scene as this, where deep grief and depression were to be manifested, of course no airy, light costume was admissable, but it is wonderful to note what expression is given to these bodies wrapped from head to foot in mourning robes; each one, by the attitude of head, arms, or hands, though shrouded, seems to represent a different phase or degree of the general woe.

It would be impossible to give a particular notice within the compass of an article of any large portion of Canova's works. We must, however, refer to a distinct class in which he was eminently successful. Though purity and simplicity were the first and permanent marks; though elevation and grandeur of conception were not strangers to his designs; yet in the delineation of voluptuous beauty several of his statues have stood the test of comparison with the best specimens of Grecian art.

His Venus Victorious, representing the queen of love on a couch, half rising and partially draped—his Venus coming from the bath; his Cupid and Psyche; particularly the group which represents Psyche at the moment when discovered by Cupid, while under the effects of the deleterious fumes which she has inhaled from the fatal jar—all of these have little to be desired in the expression of luxurious voluptuousness; though this class of subjects form numerically but a fractional part of the whole, they are none the less explicit evidence as to the versatility of the artist.

In full opposition to this class we have another, such as the various Magdalenes, of which several with material variations were executed. Of three which we recollect, the first is decidedly disagreeable. It represents the Magdalene in the awkward position, upon her knees, facing the spectator; her figure, gross and unpleasing, expresses rather plainly the life of debauchery which now, in all the "squalor of penitence," she mourns; with hair unkempt and dishevelled, she appears, apart from moral considerations, a coarse, repulsive woman; truer to nature undoubtedly, but far less attractive than the refined penitents so frequently made the subjects of artistic representations. Two other figures of the Magdalene, more subdued in tone and chaste in design, preserve in more agreeable form the aroma of penitential grief.

Hitherto we have beheld Canova on his native Italian soil; on the shores of the Adriatic, or the banks of the Tiber; but the political changes which had driven the Bourbons from France was about to induct him into a new sphere for a time. In 1802, at the invitation of the first consul, Canova visited Paris. His warmest admirers admit that he received a most hearty welcome from the artists and literary men of France. One of his most appreciative biographers speaks of his reception as follows:

"Pendant son premier séjour à Paris, Canova reçut des artistes l'accueil le plus distingué. Le peintre Gérard fit son portrait. L'Académie des beaux-arts se l'associa, et il assista à plusieurs séances de l'Institut comme un de ses membres. Rappellé en France, quelques années après, pour faire la statue-portrait de l'impératrice Marie-Louise, il en plaça la tête sur une figure de la Concorde."*

Not content with the power of the bayonet, and the empire of force which he had established, Napoleon desired to perpetuate his influence through the medium of the arts. He wished not only to preserve in enduring form the memory of his own triumphant cause, and the lineaments of himself and

* M. Quatremère de Quincy, *Memoires historiques sur la vie et les travaux de ce celèbre artiste.*

family, but with the true instinct of genius he felt that whatever talent he could draw to his court, whether by the presence of men of science, of literature, or art, would be measurably reflected upon himself. He had, also, that ambition for France that could not bear to see a superior mind in any pursuit or profession fulfilling its mission elsewhere than in his own capital.*

The object of his invitation to Canova was to induce the artist to change his abode, to abandon his loved Italy, and to transfer himself and studio to the French capital; every inducement was held out; increased pecuniary rewards; the glory of embellishing the chief city of Europe, comparing the number of his own subjects, his powers, and resources with the limited and dependent condition of the papal states; a dependence, by the way, which the first consul had been prominent in producing. Napoleon endeavored in repeated conversations to induce Canova to accept the friendship and protection of the French court, and to abandon Italy forever. But the proposition met with no favor in the mind of the artist. A quiet patriotism bound him to the fate of his own country and to the fortunes of his friend Pius VII. He saw nothing in Paris to compensate for the loss of Rome; nothing in the new and interested friendship of the first consul to make him forget his early friends and patrons in Venice.†

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* Napoleon was in the habit of treating him with the most friendly familiarity. The following anecdote will serve as an illustration. The emperor said, "A la bataille de Wagram j'ai tiré cent mille coups de canon et cette dame que vous voyez (pointing out to him Maria Louisa) souhaitait ma mort." "C'est bien vrai," replied the empress.— *Vita di Canova*, Cicognara.

† At all events, Canova was in no particular need of a patron at this time, for not only was he in comfortable circumstances, but had acquired wealth. It should be added, however, that he made the most generous and honorable use of his money:

"Les travaux immenses et continuels de Canova furent pour lui très lucratifs. L'argent qu'il gagnait lui permit, dès le principe, de former de nouvelles entreprises, et dans la suite de fonder d'utiles établissements. La bienfaisance fut chez lui une vertu pratique. Quand l'Italie fut envahie par l'armée française, la capitale du monde chrétien étant menacée, les cardinaux, le clergé, et tous les grandes propriétaires de Rome quittèrent cette ville; la détresse y fut extrême. Canova employa toutes ses resources à decouvrir les indigents Ses libéralités, dans une seule de ces années calamiteuses, s'élevèrent à 140,000 francs.—M. Miel, dans *L'Enc. des Deux Mondes.*

He subsequently accepted, however, some commissions; among these was a bust of the emperor, which was to have furnished the portrait model of a colossal equestrian statute. The horse only was completed when the downfall of Napoleon led to the substitution of another rider; while the statue of the French emperor, sixteen palms high, met with a curious fate. It was presented to the British government by the restored Bourbon, King Louis XVIII., and subsequently given to the Duke of Wellington; in whose house in London it was assigned to an obscure position rarely noticed by visitors. But the diminution of our space reminds us that we must take leave of Canova for the present, with a few brief general remarks.

The charm of his style lay in keeping close enough to our ordinary nature, in his ideal figures, to make it possible for man to claim kindred with the highest, yet elevated so far above the common level, as to be a source of inspiration and aspiration. He kept so close to the great heart of nature that we never altogether lost sight of its grand possibilities as we look upon his "winged genius" as some symbolic figure of Virtue. Yet his tendency is always upward. His heroic figures are grand *men;* they are not demi-gods, with natures unknown to our human experience. For the greater part of his life he did nearly the whole work of even his largest compositions with his own hands; but towards the latter part of his career he introduced the usage, since practised universally, of allowing workmen to reduce the block to its last stratum of superfices, which could never be risked by artists while working from models of inferior size. He loved his work, so that the finishing of a statue was a delight, which accounts for that extraordinary mechanical perfection of flesh surfaces in the originals of his Psyches, Venuses, and Hebes. Part of his popularity while living was doubtless to be ascribed to his amiable and unpretentious manners, but his fame as an artist must rest solely upon his works and on the theories of art by which he was enabled so far to excel his

fellows. These, studied in detail, furnish every principle which is essential to the art of the sculptor; but if any would attain to so high a position, they must not only enter on life with a superior mental endowment, but must emulate his studious care, his technical knowledge, his avarice of fame, his perseverance and assiduity; above all, they must throw into the spirit of their work those moral sentiments, that purity of soul and simplicity of expression—that truth to what is highest and best in nature, which was ever the dominant element in the compositions of Antonio Canova.

ART. III.—1. *Die deutsche Literatur.* (German Literature.) Von WOLFGANG MENZEL. Stuttgard. 1840.

2. *De l'Allemagne.* Par Mme. DE STAEL-HOLSTEIN. Paris.
3. *Introduction to the Literature of Europe, etc.* 2 vols. By HENRY HALLAM, F.R.A.S. 1852.

FOR the past twenty years we have heard and read much of the vast wealth and originality in German literature and art; and much has been printed, during the prolonged discussion of the Franco-Prussian war, of the national characteristics of the two antagonistic races. We have had Mr. Carlyle himself, in the newspapers upon the subject, with a fierce, German bias, and naturally, from the contemner of Voltaire, the fond extoller of Jean Paul Richter, and the eulogiser of Fredric the Great in his moral capacity. The stability of the German, the instability of the Frenchman, the high-toned worth and simple religious faith of the former, and the fickle virtue and infidelity of the latter, have been sounded with trumpet and drum, and, from sheer force of repetition, out of our national authority-worship and circumscribed observation, have grown an assent and a conviction, as solid and satisfied as though born of revelation or mathematical demonstration.

We yield to none in our respect for the great German thinkers and authors of the past and present day, and are swayed by a certain sympathy for the poetical revery and abstraction which characterise so many German productions; nor are we prone to dispute a practical benefit, in elevation of thought and purpose, to be derived from much of their subtle and exquisite research and theory. At the same time, we are not prepared to yield to that emotional enthusiasm which has been gaining ground of late, quite perceptibly with our younger generations, and which has a tendency to disparage the luminaries of other literatures in its exclusive German taste and fervency. Most of the French classics remain untranslated, whilst we have the ancients, the Italian, and the German in relative profusion; and that *Athalie*, the *Cid*, and the *Comedie Humaine* do not exist in English is our loss, and no compliment to American or English scholarship and appreciation.

The reasons that German ascendancy on the Continent, political, moral, and mental, has been so warmly advocated and asserted in America, are various, and not all of them of recent birth. An American, from boyhood up, is not sedulously taught to look for a corresponding exponent to the old English gentleman of ditty and tradition in the modern gallery of French humanity. Englishmen, and in a measure we, regard that type as indigenous to a perfected Anglo-Saxon race, infinitely more precious and wholesome than anything to be encountered among continental nations; and though, possibly, "the old German gentleman" may at present be recognised and admitted, "the old French gentleman" still sounds vague, if not discarded, upon our jealous ears. For the Frenchman, especially, is popularly considered by us as an irreligious sort of foreigner; a frog-eater ranked by many as but a few degrees above the best of brutes. To a more lenient mind he is a pleasing man-monkey, foe to athletic sports, but given to bows and grimacing, or the accomplishments of a dancing-master; and possessed of an intellect

exactly equal to inventing fashions for dress or bald wit fo the stage. Even the geographies of our boyish school days in magnanimous impartiality, engraved the Frenchman, no as an arch-fiend precisely, but with diminutive boots an waist and cane, and uplifted hat, in the very act of satani salaam to company understood to be approaching from th other page.

True, there are those more travelled and wise who smil at such vain conceits and prejudices, and who are quick t recognise, in the literature of the French, their adroitness an sagacity in the arts and sciences, and their genuine philosophy a decided superiority. But such are not in large majority nor ordinarily the most given to declamation; and the Ger man vote and influence in our country, the comparatively inconsiderable French population in our cities, with tha lingering animosity for the attitudes and attempts of th emperor, during our civil strife, and the popular credence jus referred to, explain why our electioneering leaders were s safe and earnest in their wild praise of the one, and so denun ciatory of the other party to the war.

The cause of protestantism, too, which somehow is sup posed to be involved in that of Prussia, has enlisted a stalwar well-wishing for the success of that state on the part of worthy calvinistic church-folk, and with some of our prominen preachers, writers, and different manufacturers of current senti ment. But one and the other of all these public teachers we make bold to say, have ignored or slighted in their zea the recent history of diplomatic Europe, the record of moder religious development, or the annals of *belles-lettres* of th christian age. Nay, we are rash enough to doubt if eve Mr. Carlyle's peculiar arguments in support of German right eousness in might and calculation have completely settled al dispute as to the Teuton's meritorious priority of the Gaul The struggle is not over, although the fight be done for th present, and we feel sure that much of this sweeping ad miration of Prussian character, as against the French, wil

prove in time—as has been somewhat the case already touching the real provocation to the war—to rest upon anything but a fair and sagacious investigation.

Not only German protestantism, however, but German philosophy and music, and German literature, have become decidedly the vogue. One hears terms imported into common conversation which have been quarried from the most abstruse works of German metaphysics. The flippant and pretentious, and some of the lauded contributors to our magazines, have Kant and Schelling trippingly on the tongue, as though the *Criticism on Pure Reason* or the *Soul of the World* were subjects for tea-party gossip, or lent, when quoted, an imposing mien to a penny-a-liner's lucubration—forgetting that, of all the learned men in Europe, those who can pierce the baffling terminology, or the tortuous neologism in which these authors seem fain to burrow with their doctrines, and grasp in their entierty the great ideas beyond, might almost be counted on the fingers. German poetry, too, is fluently lisped in some of our high schools, by effulgent young misses who chatter in the German tongue. Göthe, Beethoven, Lessing, and Heine receive an hysteric, if not unfathomable adulation in that wondrous vernacular engrafted upon darling and delight; and German fairs and Mühlbachs, as well as "*lager*," have met with fiscal success and metropolitan renown.

Yet German merit, after all, is not such superlative perfection; nor has the ecclesiastical dogma, in that land of religious polemics, been always so immaculately or so completely protestant as our rhapsodists would have us suppose. True, the Hussites, when they christened themselves the people of God, called all who differed from them Philistines, yet the Lutherans, with Leibnitz at their head, once made overtures to the pope.* The southern states, which include several

* "Among the German Lutherans there seems to have been for a long time a lurking notion that, on some terms or other, a reconciliation with the church of Rome could be effected. . . . . Leibnitz himself, and Melanus, a Lutheran divine, were the negotiators on that side with Bossuet." etc.—Hallam's *Lit. of Europe, ed.* 1841, vol. ii. p. 282.

provinces and more millions (to say nothing of Austria), are still Romanists to the core; Catholic, too, not as in France, but as in Italy and Spain; and the continued struggle between Lutheranism and Calvinism,* throughout the country, had left lurking, in many a German village, a spirit of rebuking pity for a neighbor's heterodoxy equal to any French fanaticism. Protestantism, we verily fear, is as ambiguous to-day, in some parts of the home of Tanler, Böhme, and Lavater,† as were the puzzling and elastic rights of the Spanish inquisition under the auspices of the Jesuits; and is as primitive and tolerant in the depths of Hanover, and certain Saxon bourgs, as was the colonial puritanism of Massachusetts Bay. Nor is the life of a Jesuit in Prussia proper made any more genial in his daily associations than that of a Calvinist in the heart of Brittany, where a spice of bigotry still remains; just as republicanism is encouraged and protected by the same benignant laws at Paris and Berlin.

But few of the German masters have not been taxed with ultraism or infidelity, we would observe, for German speculation is religion, and religious speculation pervades most of German literature; nor have mysticism and scepticism been any more promulgated by the reasonings of Hobbes and Hume, or those of Bayle and Voltaire, than by the German philosophers from Spinoza to Strauss and his successors. "Say nothing, I pray you, about your Berlin freedom of thought and writing. It is reduced simply and solely to the freedom of bringing to market as many jibes and jests against religion as you choose, and a decent man must speedily be ashamed to avail himself of this freedom," wrote Lessing to Nicolaï, about two generations ago;‡ and it was by a Dutch cousin, the famed Erasmus, that Martin Luther was assailed

* The Berlin cabinet became Calvinist in 1530.

† Tanler of Strasbourg was the founder of the Theosophists in the 14th century. Jacob Böhme (or Behumen) was a shoemaker of Gorlitz in the 17th century, who recounted his visions and ecstacies.

‡ Menzel's *Ger. Lit.*, vol. ii. p. 407.

and riddled for his rashness and abuse in the conduct of his mission.*

We assume it to be the case almost without exception, in older Europe, that the national mind is described by the literature rather than the politics of a country. For kings and kaisers can fashion the latter to suit their selfish ends, whereas they can merely suppress or stimulate, they cannot create, the other.

The French language, compared to the English and German, was already formed in the eighth and ninth centuries, and at the time of the first crusade the provincial and the French dialects in France possessed "a regular grammar, established form of versification, and a flexibility which gave free scope for the graceful turns of poetry," says Hallam;† and Abelard sang on the banks of the Seine two hundred years before Chaucer. Since the days of Francis I. (1515–1547), called the father of French letters, and the creation during his reign of a professorship of the French language, French literature has been extensive and precise according to its epoch, with a classical dictionary and designated authorities from an early period; and while the German language was yet fluctuating and corrupt, and while even British literature was disputed and confused. With Froissart, Rabelais, and Montaigne, and the French Academy projected by Richelieu, and numbering Balzac (Jean Louis), Voiture, and Pascal among its earliest members, the foundation of French scholarship was consolidated; and there rises a galaxy of illustrious names and solid reputations, from Malherbe and De la Rochefoucauld, through the reign of Louis XIV., enhanced by some of the purest of Christian writers, like Bossuet, Fléchier, Fénelon, and Masillon, and by world-known celebrities unsurpassed since Greece and Rome in every department of *belles-lettres*.

Although Germany, it was computed, was producing

* *Lit. of Europe.* For Hallam's appreciation of Luther's Latin writings, see vol. i. p. 197.

† *Ibid*, vol. i. pp. 36, 39.

ten millions of volumes yearly, and Menzel feared* that the number of authors would soon outstrip that of the readers still, fifty years before he wrote, the Germans themselves questioned whether they had a literature. For, albeit the German language was written prior to any of the living European tongues, only a few names conspicuous for learning such as Magnus of Laningen, Reuchlin, Hutten, Melancthon etc. (Heidelberg was established in the fourteenth century) appear in Germany up to the Reformation, or the middle of the sixteenth century; and mysticism and ecclesiastical contention had already set in with Paracelsus,† and the onslaught of Erasmus‡ upon Martin Luther. With Copernicus Gesner,§ Tycho Brahe,‖ Kepler, and Puffendorf, we have comprised nearly all the notabilities antecedent to, or during the thirty years' war, which finished in 1648, or about the beginning of the most glorious season of French literature Simultaneously with the *siècle* Louis XIV., Prussia made certain efforts in behalf of domestic letters, and Guericke Nicolaï, and Herder are some of her distinguished names. But the existence of the grossest spirit of dogmatical dispute, and the still unsettled condition of the German language, prevented any considerable advancement of national erudition, until the advent of the greatest German genius of his time, Leibnitz (1646 to 1716), who wrote in French in preference to Latin or his mother tongue;¶ as up to the eighteenth century** Quin

* "This were no misfortune, where the wise man who writes a book does no less, but often more, than the general who gains a victory. But when ten thousand fools take it into their heads to write books, the case is as bad as when all the common soldiers choose to become generals."—*Ger. Lit.* vol. i. pp. 4, 5, and 6.

† "This authority (that of Aristotle) was ill-exchanged in any part of science for the unintelligible dreams of the school of Paracelsus, which had many disciples in Germany.—Hallam's *Lit. of Europe*, vol. ii. p. 64.

"A mixture of fanaticism and imposture is very palpable in Paracelsus. *Ibid*, vol. i. p. 207. ‡ *De Libero Arbitrio.*

§ Gesner was Swiss by birth, but is claimed as a German *savant.*

‖ Tycho Brahe was a Dane by birth, but is claimed as a German *savant*

¶ "The first German who composed in polished (German) language after the filthy and abusive writings of the religious controversies, but who chose foreign and particularly French models, was Opitz, who died in 1639." —Menzel's *Ger. Lit.*, vol. ii. p. 355.

** Hallam quotes from a writer who, in 1714, says that only modern

tilian, as well as Longinus, was overlooked in Germany. With the Berlin Academy, founded by Leibnitz, we perceive Baumgarten and Gottsched, and the moulding of a real basis for German classics; and the poets Haller and J. A. Schlegel gave ease and grace to German composition. Bringing forward Huygens, Boerhaave, and Wolff, we reach Winckelmann, Klopstock, Kant, Lessing, Herschel, Müller, Schiller, Boutenoek, Humboldt, the two Schlegels, Tieck, and others of repute in our century.

Kepler was a great geometer, but Descartes was the wonder of his contemporaries, according to Hallam; and next to Descartes is another Frenchman, Fermat, before any third of his time (first part of the seventeenth century) and science; while the Cartesian theory of the world supplanted all others for a hundred years or more, to be in turn effaced by the ultimate triumph of the Newtonian system, and yet once more to be revived by Huygens to something of its old supremacy in certain parts.* The French, then, in the sciences, have their formidable list from Vieta, with Gassendi, Pascal, Malebranche, Laplace, Leverrier, etc.; but the Germans have no quartette to be named with the leaders of French classics, Corneille, Racine, Molière, and Voltaire, and nothing to correspond to the age of Leo X. in Italy, the Elizabethan period in England, or the literary epoch of the *roi soleil.* Rabelais, learned in oriental, Greek, and Roman speech, was a pioneer of satirists, and, as admitted by English and German critics, was the source of Jean Paul Frederic Richter and his copyists, and that of the school of wits dating from Queen Anne's time, with its Swifts and Fieldings.† Göthe, if we may rely upon Menzel, deliberately copied Rousseau, Molière, and Beaumarchais,‡ and the remarkable works of the encyclo-

books in Latin were taught in the schools, and that the students in the universities despised all grammatical learning, including that of their own language.—*Lit. of Europe*, vol. ii. p. 272.

* *Ibid*, vol. ii. pp. 245, 246, 251.

† "Vide preface Urquhart's *Rabelais*. Even Menzel compares Rabelais to Aristophanes, and declares his wit to be annihilating."—*Ger. Lit.*, vol. iii. p. 320.

‡ "He never travelled except upon trodden paths. His first work, the *Sor-*

pedists of Louis XV.'s time, headed by Diderot and D'Alembert, were freely circulated throughout Germany. Vauvenargues, Marmontel, and La Harpe, and others, instructed by the gifted Boileau and Fontenelle, are the French Lessings and Schlegels; while Cousin, Jouffroy, and De Volney are more recent luminaries in metaphysics and philosophy, the former of whom has borne off the palm in the most, accepting at home authority, notable branch of German lore.

The *Journal des Sçavins*, issued in 1665, was the father of reviews, and became what the *Revue des deux Mondes* is now-a-days, the leader among its kind; and while the ancient classics were little cultivated in England, and totally neglected in Germany, Claude Saumaise flourished in France, and the knowledge of Greek in Paris was "prodigious," for the distinguished Anne Le Fevre and Cotelier were ornaments of Louis XIV.'s reign.* But during and since that era we perceive, upon the tablets of French literature,† famous historians from Mézary to Thiers, Merimée, Michelet, and Taine; great satirists and sages, from La Bruyère and Montesquieu to De Tocqueville; brilliant women, from De Sevigné to De Staël, De Girardin, and George Sand; later poets, like Chateaubriand and Lamartine, or Béranger and De Musset; and novelists since Le Sage, like Gautier and Karr, like De Stendahl or Dumas, who represent a legion. Nor must we fail to mention the lately deceased Sainte-Beuve,‡ who Matthew Arnold called the prince of modern critics whether English, French, or German; and there are score of playwrights since the days of Beaumarchais, with Scribe and Ponsard, or Legouvé and Sardou, whose pieces, played on every stage, are unrivalled in their kind; and Balzac

rows of Werther, is nothing but a sort of imitation of Rousseau's *Nouvelle Heloïse*. . . . In the little comedies, the *Accomplices* and others, Goth copied Molière and Beaumarchais, and this, too, without equalling th originals."—*Ger. Lit.*, vol. iii. p. 49.

* Hallam's *Lit. of Europe*, vol. ii. pp. 18, 272, 274.

† Chenier's *Tab. Historique*, and others.

‡ *Vide* Nat. Quar. Review, Dec., 1869. Art., Hugo and Sainte-Beuve.

who was Thackeray's guide, shines out pre-eminent with his *Comedie Humaine.* But we cannot group nor call them: astronomers and mathematicians like Arago and Biot; lawyers from Le Maistre to Mirabeau and Beuyer; preachers like Coquerel, Lammenais, and Lacordaire; *savans* like Guizot, Renan, and Louis Blanc—a splendid galaxy, by the side of which Germany can make but a meagre show.

Literature she has; "an immeasurable multitude of books," says Menzel, with newer scientific men, historians, and philosophers since fifty years, and dramatists like Tieck, Iffland, and Ratzebue, and recounters like De La Motte Fouquet, like Hoffmann, the authors of *Undine* and *Peter Schleimhil,* etc. But with all the mass of books which Menzel derides, and the great deeds done and promised, the Germans have left the literature of the French exactly as they found it, majestic, comprehensive, and refined; and they can no more mate their own with it than the prowess and deeds of Alaric can be compared to the genius and military glory of the first Napoleon.

For perhaps a hundred years there has been, more or less, a battle between German authors who affected the ancients, the English, the French, or any other foreign models, and those who decried such in favoring an exclusive German standard. If not all of them purely German in style, in Madame De Staël's opinion Göthe, Kant, and Müller,§ the historian, are the three greatest writers of modern Germany; and she ascribes to Bodmer, Haller, and Klopstock an English fancy, while Sir William Temple and Coleridge aver that Rabelais inspired Jean Paul Richter, as we have said. Göthe and Schiller are less redolent of Montaigne, Corneille and Diderot, than Wieland of the distinctive Gallic

§ Menzel differs from Mdme. de Staël thus: "We have further to thank the worthless Johannes Müller for the introduction of the most affected style in historic composition. This dishonorable soul who had no feeling for the truth, was naturally unable to play the hypocrite, except in fine speeches. A bombastic style is always the sign of a dishonest way of thinking."—*Ger. Lit.*, vol. ii. p. 18.

"J. M.'s Universal History would hardly be worth mentioning, had it not been celebrated by the influence of his name."—*Ibid,* vol. ii. p. 28.

grace and spirit;* but the German essayists, however, Le sing and the brothers Schlegel, have a native vivacity well as discernment of their own. Not only are the *Walste* of Schiller and *Nathan the Wise* original in every sense, b Lessing's versatility is second only to Voltaire's, whi Schlegel's (A. W.) commentary upon the *Phèdre* of Racin was written in the choicest French, with which the a ademy itself could find no fault.† By Madame De Stai Schiller, whom she much admired, was likened in his poet to Voltaire, whom she did not idolise except in verse, a there, for her, the author of *Zaïre* and *Tancrède* became super

German philosophy, we repeat, is almost inseparable fro the general literature, and the German metaphysicians see frequently to have aimed at enveloping themselves in uncor mon phraseology. "Fichte's addresses to the people can nev be comprehended out of the schools," says Menzel, who fin Hegel and others equally lucid;‡ for, like the Greeks of old, th class assume an idiom for themselves and another for the readi public; which latter, even, was sometimes so recondite and o scure as to deter the most adventurous from trying to fatho it; and doubtless many a German oracle has lived and pass away, debarred from deathless fame by his dense originality

Doubtless many of our readers would prefer Engli authority on this subject, and there is an abundance of it, f of all the great thinkers of England who are familiar with th languages and literatures of Germany and France, we cann recall one, with the sole exception of Carlyle, who is not least as severe as Mme. De Staël in comparing the Germ

* "Wieland—the cheerful, amiable, delicate Wieland—a genius ov flowing, inexhaustible in agreeableness, ease, raillery, and wit, made l appearance, . . . restored to German poetry the unrestrained spi the free look of the child of the world," etc. *Ger. Lit.*, vol. ii. p. 380.

† Mme. De Staël, rather imprudently it may be, boasts of this (*L'A magne*, note, p. 368) Schlegel (A. W., the translator of Shakspeare), wi whom she was living at Copet at the time (1807), as her clever pupil. V consider *L'Allemagne* to be good *German* testimony. Not only was Mn De S. bitter toward her Paris contemporaries (vide Chateaubriand), but, Swiss decent, she was never intensely French, and she hated Bonaparte a the Lockian philosophers as much as she adored transcendentalism, Ka and Rousseau.

‡ *Ger. Lit.*, vol. i. pp. 237 and 42. Also, for observations on Kant's o scurity, *L'Allemagne*, p. 420.

literary style to the French. Happening to see De Quincey before us we take up a volume of his essays. All who know the author are aware that there is no more competent judge, whether we regard his scholarship or his impartiality. In his admirable essay on Style he puts, as he expresses it himself, "the case of the English into close juxtaposition with the style of the French and Germans." What the result is, a brief passage or two will show:

"With respect to French style, we can imagine the astonishment of an English author, practised in composition, and with no previous knowledge of French literature, who should first find himself ranging freely amongst a French library. That particular fault of style which in English books is all but universal, absolutely has not an existence in the French. Speaking rigorously and to the very letter of the case, we, upon a large experience in French literature, affirm that it would be nearly impossible (perhaps strictly so) to cite an instance of that cumbrous and unwieldy style which disfigures English composition so extensively. Enough could not be adduced to satisfy the purpose of illustration. And to make a Frenchman sensible of the fault as a possibility, you must appeal to some *translated* model."*

When the critic comes to speak of the tendency which certain English writers have to imitate the German style, he proceeds:

"A sentence, for example, begins with a series of *ifs*; perhaps a dozen lines are occupied with expanding the condition under which something is affirmed or denied: here you cannot dismiss and have done with the ideas as you go along; all is hypothetic; all is suspended in air. The conditions are not fully to be understood until you are acquainted with the dependency; you must give a separate attention to each clause of this complex hypothesis, and yet having done *that* by a painful effort, you have done nothing at all; for you must exercise a reacting attention through the corresponding latter section, in order to follow out its relations to all parts of the hypothesis which sustained it. In fact, under the rude yet also artificial character of newspaper style, each separate monster period in a vast arch, which not receiving its keystone, not being locked into self-supporing cohesion, until you nearly reach its close, imposes of necessity upon the unhappy reader all the *onus* of its ponderous weight through the main process of its construction."†

* *Historical Essays*, vol. ii. pp. 88, 89. † *Ibid*, vol. ii. pp. 94, 95.

Finally he grapples with the German style; but we can make room here only for a small *morceau:*

"Even on its own account, and without any view to our present purpose, the character of German prose is an object of *legitimate astonishment.* Whatever is *bad* in our own ideal of prose style, whatever is *repulsive* in our own practice, we see there carried to the *most outrageous excess.* Herod is out-heroded, Sternhold is out-sternholded, with a zealotry of *extravagance that really seems like wilful burlesque.*"*

A little further on De Quincey says: "Among *ten thousand offenders* who carry their neglect even to that point, we would single out Immanuel Kant." After remarking that the day may come "when the elementary principles of Kant have been brought *under a clear interpretation,*" the critic continues:

"Attention will then be forced upon his style, and facts will come forward not creditable without experimental proof. For instance, we have lying before us at this moment his *Critik der Practischen Vernunft* in the unpirated edition of Hartnoch—the respectable publisher of all Kant's great works. The text is therefore authentic: and being a 4th edition (Riga, 1797) must be presumed to have benefited by the author's careful revision: we have no time for search, but, on barely throwing open the book, we see a sentence at pp. 70, 71, exactly covering one whole octavo page of thirty-one lines, each line averaging forty-five to forty-eight letters. Sentences of the same calibre, some even of far larger *bore*, we have observed in this and other works of the same author. And it is not the fact taken as an occasional possibility, it is *the prevailing character of his style* that we insist on as the most formidable barrier to the study of his writings, and to the progress of what will soon be acknowledged as important in his principles. A sentence is viewed by him, *and by most of his countrymen*, as a *rude* mould or elastic form admitting of expansion to *any possible extent*; it is laid down as a rude outline, and then by superstruction and *epi* superstruction it is gradually reared to a giddy altitude which no eye can follow. Yielding to his natural impulse of subjoining all additions, or exceptions or modifications—not in the shape of separate consecutive sentences, but as interpolations and *stuffings* of one original sentence, Kant might naturally enough have written a book from beginning to end in one vast hyperbolical sentence."†

To many this may seem unduly severe, if not unjust; but in point of fact, it is neither one nor the other. The English

* *Historical Essays*, vol. ii. p. 95. † *Ibid*, vol. ii. pp. 96, 97.

critic indulges in no exaggeration, or hypercriticism, when he says a little further on:

"We might have made our readers merry with the picture of German prose; but we must not linger. It is enough to say, that it offers the *counterpole to the French style.* Our own popular style, and (what is worse) the *tendency* of our own, is to the German extreme. For those who read German, there is this advantage—the German prose, as written by the mob of authors, presents, *as in a Brobdignagian mirror the most offensive faults of our own.*"[o]

It will be admitted that neither Mme. De Staël nor Voltaire, nor any other "Gallic" writer, gives more unequivocal testimony than this, as to the sort of style which even boarding-school young ladies affect to imitate at the present day. "Crude, if precious confusion, then, is a quality of many German books,† but nothing which is not clear is French," says Voltaire; and the order, finish, and taste so much prized by Frenchmen—the fun in fact—was in Madame De Staël's time,‡ and is, to a certain extent, in earnest (vide Menzel's *German Literature* itself), subordinated by the Germans almost to insignificance, when considered with the matter, however arranged in a treatise or play. And notwithstanding that they have Fichte, Tieck, and comic actors, the Germans care little for satire and wit; they ponder and conceive seriously and conscientiously, but often have great difficulty in bringing their conceptions to the light of day. As to form and finish in disquisition of any grade, there can be but one opinion, outside of Germany; and how needful, if not indispensable, to the winnowing of any literature of its pinchbeck prose or poetry, on satire and sarcastic power, we

[o] *Historical Essays*, vol. ii. p. 98.

† "Les Allemands se plaisent dans les ténèbres; souvent ils remettent dans la nuit ce qui était au jour plutôt que de suivre la route battue; ils ont un tel dégoût pour les idées communes (*simple ideas,*) que, lorsqu'ils se trouvent dans la nécessité de les retracer ils les environnent d'une metaphysique abstraite," etc.—*L'Allemagne*, p. 106.

‡ For different reasons, Mme. De Staël and Benj. Constant half acquiesced in the German verdicts: the first impelled by her noted envy of her French contemporaries, her forced exile from Paris and her associations in Germany with A. W. Schlegel, finally saw but through his eyes; while Constant, with his German education and romantic temperament, upon his sudden conversion from scepticism, was, perhaps, even a readier pupil of the tenets of German philosophy and criterion.

need not say. Even cynicism, wisely used, like poison in chemistry, may have its mission, to neutralise that morbid appetite for marvel and humbug with which a public, prone to superstition for its shibboleths, is apt to be invaded. *Candide*, with its pungent irony, may have fired Fichte to attempt the elucidation of Kant, his sovereign in philosophy. Whether he succeeded in his task or not does not affect the illustration. And we are inclined to suspect that the feeling of disdain not uncommonly professed for French literature by the *amateur* of the German, moderately versed in the other, arises from his proclivity—which an exclusive familiarity speedily creates—to accept, as a correct standard of style, the sober verbosity of Müller, or the arbitrary technicalities of Kant (so antagonistic to French excellence), or from his faith in the charges of the German aristocrats upon French productions.* Although the French classics have, incontestably, their *fond* as well as finish, the German inquisitors, by imperiously assailing them,† compassed their object of creating, at home, a prejudice against the French criterion:‡ and the enraptured reader of many German authors can but be gained by the prevailing antipathy conveyed in this ever-recurring cry of French affectation or frivolity. Virgil and Juvenal are every whit as pompous and frivolous as Racine and Molière; nor are Pascal and Diderot, one or the other, as every student of them knows; and he who imagines the reverse, or Voltaire, Balzac, or Sainte-Beuve frivolous, when placed side by side with any German essayist, novelist, or critical judge, has but to read and understand to realise his misconception.

* "Lessing en clâmant le goût français et en se rallaint à Diderot dans sa manière de concevoir l'art dramatique, avait bannit la poésie du théâtre," etc.—*L'Allemagne*, p. 206.

† Madame De Staël, speaking of the Schlegels' and other criticisms upon the French authors, says: "Ils ont pretendu que les traits distinctifs du caractère français s'etaient effacés dans les siècles appelés classiques: que notre littérature perd en originalité ce qu'elle gagne en correction . . . Ils ont attaqués nos poëtes en particulier. Ils croient trouver, dans plusieurs de nos tragédies, l'espèce d'affectation pompeuse que Rousseau réprochait à Sulli," etc.—*Ibid*, p. 370.

‡ "Fifty years ago (1785) we regarded the French as a species of demi-gods; twenty years ago as a species of demi-devils; we were brutish enough to crawl before them and more brutish still to scorn them."—Menzel's *Ger. Lit.*, vol. i. p. 60.

Frivolity there is in the French as in any great literature. There is water in bread and foam upon beer, and there was frivolity, and to spare, among the ancients. Nor was Shakspeare always free from it; nor Pope nor Byron, nor Tennyson of late, for it is by no means peculiarly a Gallic trait. But nowhere, according to Menzel, himself one of the most boisterous denouncers of the French standard, do pomposity and frivolity of the gross and legitimatised type display themselves more conspicuously than with the Germans.* The dignity of the mild Jacobi is eloquent; the phrase of Lessing is frequently keen and elegant, and Schiller is often grand,—all are far from frivolous, it is true; still, apprehensive of the spread of French atticism, the German masters, in reality, encouraged none† that did not make their philosophers less affected or involved, nor render Göthe‡ a strictly moral, nor Lessing § a strictly christian writer.‖

If, in point of reputation Leibnitz be the Bacon of Germany, Descartes¶ is the Bacon of France. Men do not un-

* "Our writers are too ready to deliver oracles, and seek to spread around themselves a certain nimbus, and to mystify the reader as the clergyman does the layman and the schoolmaster his scholars, etc."—*Ger. Lit.*, vol. i. p. 47.

† "On ne sait pas faire un livre en allemagne—rarement on y met l'ordre et le méthode qui classent les idées dans la tête du lecteur; ce n'est pas parce que les français sont impatients, mais parce qu'ils ont l'esprit juste, qu'ils se fatiguent de ce défaut; les fictions ne sont pas dessinées dans les poésies allemandes, avec ces contours fermes et précis qu'en assurent l'effet, et le vague de l'imagination correspond à l'obscurité de la pensée."—*L'Allemagne*, p. 371.

‡ "Thus he (alluding to Wachler) deifies with moral and patriotic ardor the immoral and unpatriotic Göthe."—Menzel's *Ger. Lit.*, vol. i. p. 29.

§ "Lessing n'etait point orthodoxe en réligion. La christianisme ne lui etait point nécessaire comme sentiment, et toutefois il savait l'admirer philosophiquement."—*L'Allemagne*, p. 432.

‖ Before quitting Menzel for the time, we ought perhaps to remark that though his strictures upon his countrymen seem severe, he is, nevertheless, sanctioned by his American sponsor, not only as an authority (Prof. Felton tells us that Menzel had been styled the Burke of Germany) but in his extreme views of some of the eminent German works and authors. "Fred. Schlegel," says Menzel, "is one of our deepest though most impure thinkers" (vol. i. p. 252). "Kotzebue is seductive in the name of innocence" (vol. iii. p. 95), and "Hoffmann-Swaldan, the first lyric German poet of his age (17th century) published poetry obscene to loathing" (vol. ii. p. 359.) "Gutzkow endeavored to surpass Heine and Wienbarg, inasmuch as he not only called Christ a fool and an impostor, the Apostles oxen and asses, ... but set up the assertion that it would have been better had the belief in God never been entertained" (vol. iii. p. 333).

¶ Dugald Stewart, in his *Elem. of Philos. of Human Mind*, calls Descartes the father of that philosophy.

derstand Newton, Montesquieu, or Kant, simply by wishing it, and as there is no royal road in mathematics, so it requires a special mental power to dilate upon the merits of the Lockian, the Kantian, or Cartesian school of intellectual philosophy which we do not pretend to possess. With Aristotle as the first materialist, and Plato the first idealist, and bearing in mind that, of later philosophers, Bayle went against Hobbes and Spinoza, that Leibintz disputed Bayle, that Malebranche differed from all, that Locke demolished Malebranche, and that Cudworth thought he used up Locke, because, as writes Voltaire, nobody could understand him—we are content to let contending metaphysicians of our day elucidate, admire or devour one another; maintaining, meanwhile, our sincere defence for the radiant names enrolled in the services of the schools just mentioned. Here we can but sketch the relative stations of a few mystics or sceptics in their respective countries.* From the shoulders of Leibintz the mantle fell, in Germany, to Kant and Jacobi, as after Descartes came Malebranche and Condillac, and following Bacon, in Great Britain there were Locke, Dugald Stewart, etc., all with different theories and treatises, but each and all of these were potent men. In Germany, Fichte, Schelling, and Hegel; and Cousin Fourier, and Comte in France, are of a later day. Betwixt transcendentalism and materialism, supernaturalism and rationalism, the romantic and the classic, the choice in psychology is large and free.

In painting and music, in which they excel, the Dutch and Germans copied and engrafted as the French have done. Albert Dürer, the contemporary of Raphael, went to Venice while yet young, and painted the martyrdom of St. Bartholomew in St. Mark's Church, in 1506; and Francis I. brought Da Vinci and Del Sarto from Italy in the beginning of the

* We might refer the reader to Mme. De Staël's reflections upon the English, German, and French philosophers contained in *L'Allemagne*. Transcendentalist in the extreme, the profound and elaborate chapters of her book are wickedly attributed to the inspiration of Fred. Schlegel, who like his brother, was an admirer of the gifted authoress of *Corinne*.

sixteenth century. The German school proper had only produced Dürer and Halbein as painters upon canvas, down to the first half of the seventeenth century, when they adopted the French academies of art as their models. But German painting was submerged in the sixteenth century by the rise of the Flemish school, with Rubens as its prince, and the Dutch school with Rembrandt. The French school, from Cousin, Poussin, and Claude Lorraine, about the year 1600, down to Delacroix and Ingres, and the Belgian, which comprises the former Dutch and Flemish, are the two academies of our day.

The Dutch, as Menzel says, may have been the first in the middle ages to excite a taste for music in Italy, and to prepare the way for the flourishing epoch of Italian church music, from which sprang the opera; yet in sacred music, before Mozart and Beethoven, are Palestrina and Pergolesi, and Frescobaldi wrote figures in Rome a century before Bach, while Rossini composed symphonies at the same time with Beethoven, who followed Bach as the pioneer of modern German masters. But though, like the French, the Germans were taught by Italy—for even Handel was there when but four and twenty, and Haydn while a vagrant lad had lessons from an Italian tutor—yet Mozart, as "*le maître des maîtres*," was placed by Rossini above them all; and even with their better finish and simple taste, and their Auberts, Chopins, and Gounods, the French school, though advancing, must yield the precedence, we presume, to German minstrelsy.*

But we have shown, we think, that no more than the French is the German purely literary and artistic character stamped by that broad and unique originality† attributed to it

* It is worthy of remark that, whatever doubt may be entertained on this point, it is almost universally admitted that the Germans excel in their musical instruments, especially in their *pianos*, as much as they do in comparative philology and profound classical scholarship, in which they are acknowledged masters. We only wish that our literary institutions would profit as much from their excellence in the latter, as all lovers of good music, especially the ladies, do from their excellence in the former—*bezeugen* Steinway.

† "It is true, and the successive histories of the Gallomania, Græcomania, and Anglomania demonstrate it to be so, that our ancestors have borrowed by far the greater part of their fame from foreign lands."—Menzel's *Ger. Lit.*, vol. ii. p. 388.

in our country. The effects of the romantic chivalry and superstition of the middle ages, which the English and French shook off in the practical turn given to their life and literature. lingered longer with the Germans, and in the shape of mysticism and "elective affinity," impregnate to-day their letters their religion, and their national character. But even in the walks of empirical philosophy they have been met by great minds in England and France, who certainly could appreciate if disinclined so elaborately to follow them upon certain ground.

The priority of the German to the French, or almost any European peasant, in his way of existence, his native sense, solidity, and elementary schooling, has been constantly proclaimed and of course accepted. Yet the notion of that ignorance *crasse* of the French provincial, although reiterated by M. Prevost Paradol in his argument against the empire—whatever it may have been twenty or thirty years ago—is not sustained by our experience of later times among the Normans and Britons in their provinces. Railroads, and a financial impetus given under the second empire, have converted a superstitious boor, who hid his gold in the ground, to a possible citizen, competent to calculate his profit in subscribing to the public loans, and ready with his modest means to equip his son or younger brother for Paris, as a porter in a bank, or a city journeyman.

The German yeoman we have met was the small French farmer in all except religion. Living in nearly the same manner and trained like the other by feudal tradition or political manipulation, he is of equal importance to the state, has identical objects in life, and, like the Frenchman, is not dissatisfied with his lot; and since railroads are fewer in Germany than in France, he is less familiar with the capitals of his country and the world at large. The French rustic sleeps under the roof with, but on the floor above, his hog, and perhaps his ass. The lodging of the German, of a corresponding class, often fronts inside the barn, so that the stall of the ox is passed

to search the domicile of its owner. The family diet, in one or the other of these establishments, consists chiefly of bread and vegetables, with cider and wine in France and beer in Germany; and either husbandman, if he knows,* cares nothing about steam machinery for his farm, but clings to the hoe with a handle the length of his arm, tackles his wife with his mule to his plough, and his cattle by the horns, as his forefathers did two hundred years ago. At sunset both worthies hie to the restaurant or tavern of the town, where the sacristan or *curé* reads and expounds the daily news; and if the German is ruminating and reserved, and the Frenchman garrulous and unheeding, the results as to knowledge will hardly vary. Both are sober, thrifty, and often dull, measured by a city rule, but of a higher average than the corresponding types are in Spain and Russia.

Yet the German, too, resembles the Spaniard in some points in which the Frenchman assuredly does not. The two first-named are not only stubbornly adverse to hurry for themselves, but are beyond all bribe to use despatch for others; and both have a covert contempt for foreigners, their ways and innovations, where the Frenchman shows an alacrity for honest gain and an unobtrusive but lively curiosity. The Baden hackman who has lived, from his youth, within an hour's jaunt of the French frontier, and who has heard that language common with his "fares" and in his town for ages, will stare at you as though you had spoken Choctaw, if you give him your address in French, as you quit the railway station, and imperturbably await the coming of the sworn interpreter. In Calais and Boulogne, not only do the common folks understand a cockney's English, but what American tourist has not been charmed with that attribute in provincial maid or master to *divine* the meaning of a stranger madly at loggerheads with a French *patois*?

The military education of the conscript is more elaborate

* In France he has, or had, access to all the Emperor's model farms, where every invention and improvement was tested for the benefit of the farmers of the country.

in France, and his drill and service are more elaborate
Prussia ; and if the French peasant to save his candle go
bed in the dark, and the German consume his rashly at t
dumb symposium of the village inn—where in smoky gr
vity he reveals for the beer of Fatherland a real capacity,
which may possibly be due that superiority of caste wi
which the world endows him—neither of them devours
with a gusto like the subject of the czar. And while o
reveres his sacristan with a sort of schoolboy's dread, the oth
sees in his *curé* the faith divine, and both are awed by tl
sight and dazed by the title of petty prince or pageant m
jesty.

The children of Germany and France are rarely witho
their winter schools,* and their moral instructions and exa
ples differ little, for among Germans and French are popul
habits of virtue, and certain pernicious practices more or le
prevalent, which have been handed down, modified it is tru
by successive generations ;† while it cannot be denied th
Paris, in fashionable immorality, is equalled, if not eclipsed, l
Vienna and Berlin. Throughout Germany love is a poe
cal but independent sentiment, and the faculty of divor
which does not obtain in France, is availed of among t

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* In the Report of Mr. John W. Hoyt, U. S. Commissioner to the Ps
Exposition, we find public school statistics of European countries wh
possess a certain authority. Mr. Hoyt announces great progress in a s
tem of popular education in France during the past fifty years. He c
putes that twenty-five per cent. of the youngmen in France cannot read
write ; whereas in 1866 only twelve and a quarter per cent. of the Pruss
conscripts were so benighted. Or, in other figures, while seventy-five
cent. of the males of France could at least read and write, eighty-seven
three-quarters per cent. were so competent in Prussia. In the latter co
try a rudimentary education is made compulsory by the rigid control
government, with a view, of course, to military service ; whereas, in Fra
all education, religious and civil, is voluntary. In 1867 the empire app
priated $4,253,624 to popular education, and in 1870 the sum was, we
lieve, upward of six millions of dollars. The ratio of improvement
regard to schools under the empire, we are confident, has not been surpas
by any European state. Mr. Hoyt found popular education in Austria a
low an ebb as in Great Britain, the same being voluntary in both countri
and he awards the prize to Switzerland and Holland.

† The *droit du seigneur*, since the revolutions, has almost entirely
appeared ; but "bundling," called by the Dutch *questioning*, is yet a cust
in remote German villages.

country people almost as in Illinois. Yet romance on the "affinity" idea, rather than interest or pure caprice, as to marital irregularity in a community, is about the same.

At home, in America, we naturally judge the character of the German to be as we encounter it here, where it is speedily qualified and elevated by contact with our society and institutions; and as we perceive but little or no inferiority to ourselves, we presume the European German to be our equal and hence superior to the French.

The German nature is rude but lymphatic; the French sanguinous but polite, and both are nominally easy tempered. The horrors of the French revolution are exceptional in the character of the nation, as is that Arcadian simplicity of German ducal courts, given us in such a variety of pretty chronicle—as though class demarcations were not stronger in Germany than in England, France, or any christian land but Russia—with the theatre at four p.m. and a familiar tea to precede bed at nine precisely. A simplicity, forsooth, which merges into barbarous *naïvété*, as one goes down the ladder to find a German laborer's cot not so constantly that abode of unerring love and religious faith as generally represented. If the German have a wit, his wife an attachment, and his children a respect for him that the Frenchman and his have not, rural Germany of to-day does not disclose it. The big stove and the heat—Heinrich craves fresh air as a cat seeks water—renders him more stolid and impenetrable than the Italian or the Englishman, and the antipodes of his Gallic neighbor, who was born and has flourished, one might say, forever out of doors. And if in certain provinces the German has a few more public schools, neither by individual learning nor class advancement doth he show it. That delight in dreamy, inactive life encouraged by the philosophy of his country, which reaches everywhere, makes him indifferent or a fatalist, which is not practical rearing in the American idea; and in his religion, when not Lutheran, formalist and exact, he floats about uncertain, waiting, like his philosophers, for the newest if the vaguest faith.

As the literature of a country describes the national min under diverse governments, so may its political history reflec the general spirit and temper of its people. The revolution of France broke out among the masses, and, forcing their wa up, embraced eventually all classes; whereas, German war and fighting have always been of the dynastic kind,* in which the lower orders were drawn and to which they we forced to submit. For the past hundred years, the only wa of ruling the French has been to coax them with the beli if not constantly the fact, of their power and suffrage in t government, whilst not only have the Germans been bought a sold in cities and provinces, like cattle by the herd, since t rise of the Bismarck star, but William of Prussia at home h half a dozen times since his short reign began, dissolved dragooned his parliament which dared to murmur at his au cratic will.†

Spasmodically, for ages, the German apostles ha preached liberty, union, or disunion in confederation, a the German people have invariably assented, and th bowed the neck to king or princeling next in turn. For ye their philosophical and literary lights have tampered c tinually with the basis to our christian creed,‡ and ha quarrelled and dissected one another.

So much for the literary, scientific, and religious supe ority claimed at the present day by a certain class of our p ple for the Germans as compared with the French. But

* Even the thirty years' war was not one simply of and for religi It was begun by the uniting of the protestant princes in 1608, and the o strictly popular contest was in Bohemia, which country at once became bone of contention between Ferdinand II., Fredric V., and Maximilian Bavaria; and, later, the king of Denmark, Gustavus Adolphus, and Lo XIV., each sought his plum in the convulsions which desolated Germany *Enc. Americana, Art. Thirty Years' War*, vol. xii. p. 232 et seq.

† Lessing declared the Prussians in his day to be the most ensla of European peoples. See his letter in Menzel's *Ger. Literature*, vol. p. 407.

‡ "Every year a thousand theological (notable) writings make th appearance. . . . . I would gladly apply the torch to this hea theological literature, of which there is scarcely a tenth part which is ungodly."—*Ger. Lit.* vol. i. pp. 20, 24.

are also told how much German morality is superior to French morality; in short, we are called upon, in a hundred forms, to regard German civilization as the great model of our time.

We are expected to believe that if there was any doubt on this point nine months or a year ago, it has been entirely removed by the complete prostration of France by the Germans, although the superiority of the Turks might have been claimed on similar grounds, when they overran the Byzantine empire and captured Constantinople; also, the superiority of the Goths and Vandals when they triumphed over the civilizations of Greece and Rome.

But as we have quoted an English author relative to German literature as compared to French literature, we now quote an English statesman relative to German morality and German civilization. Many of our readers have doubtless read the speech delivered by Sir Robert Peel in the house of commons on the 17th of February last; but in order that all might be able to appreciate the manly, fearless spirit of the author, we subjoin an extract from that part of it which so well illustrates the superiority of German civilization, as well as German magnanimity!

"There were three circumstances connected with this war which showed the *savage* way in which it had been carried on as regarded Germany. These were authentic. Here was an order of the day of Prince Frederick Charles, in December last, which was posted up in Somme: 'Exert all your activity; march and *parcel out the property of the enemy; exterminate* this horde of brigands which they call the French army; the world cannot rest in peace so long *as the French people survive.*'

"Here was another order signed by the king of Prussia himself. It referred to Alsace and Lorraine, which had been taken captive in war, but had never been legally attached to Germany. The order was dated the 13th of December, and posted up in Strasbourg. The royal order said that, whoever joined the army of France should be subject to confiscation of his property and banishment for ten years, and that whoever was absent for more than eight days would be deemed to have incurred these penalties. Would the house credit it, that this order applied to 13,000 young Alsatians who had joined the French army in defence of their liberties and rights?

"When the armistice was made he was on the frontiers of France and Switzerland. The king of Prussia had telegraphed to Berlin that an armistice had been concluded, and that it applied to all armies in the field and on the water.

"Would it be believed that after M. Favre had telegraphed that the armistice was to extend over the entire field of war General Manteuffel *actually attacked Bourbaki's army and drove it into Switzerland?* He (Sir Robert Peel) *had been witness of what followed.* He saw the French soldiers perishing amid the mountains of the Jura, and asked, was it not lamentable that under such circumstances such an attack should have taken place?"

Sir Robert also alludes to the many defenceless French villages plundered and burned; the women and children, as well as the men, being shot down or driven naked into the woods, to perish from cold and hunger. And when or where has French morality or French civilization manifested itself thus in the nineteenth century? What French prince or French general has issued so atrocious an order of the day to his victorious troops, during the same period, in a European war, as that of Prince Frederick Charles?

ART. IV.—*Reports of Central Park Commissioners and other Documents.* New York. 1865–1871.

WHEN Gustavus III. requested the great Linnæus to give him some hints for his new park on the banks of the Dahl, the philosopher sent him the following, among others: "Your majesty should commit your favorite horses to the care of an ignorant groom, or place your choice cattle in charge of an ignorant cow-boy, rather than entrust your trees and shrubs to the manipulations of an ignorant gardener. But, above all the candidates for the supervision of your park, *beware of petty politicians.*"*

To many this may seem to exaggerate the importance of selecting for the management of parks and gardens only those

* *Collectio Epistorarum quas ad viros illustres et clarissimos scripsit Carolus a Linne.* (Collection of Letters written to illustrious and celebrated men, etc.)

whose intelligence, tastes, and habits qualify them, at least to some extent, for the duties which they are expected to perform. But we think that all willing to be convinced, who will favor us with their attention for one hour, or even half an hour, will admit that the philosopher was right. Although we pretend to have gleaned some knowledge of botany—having spent more than one decade among trees, and shrubs, and plants, not altogether unmindful of the phenomena they present under certain circumstances—we shall not ask the reader to accept our views as to what may be expected from the present "supervision" of the Central Park further than we shall be found able to sustain them by those of men whose authority cannot be disputed.

The main facts require, indeed, no elaborate testimony; they can be judged without any extensive knowledge of botany or any other science. Common sense and ordinary intelligence, with a moderate use of one's eyes, are sufficient qualifications for the task. We should be very stupid if we did not know something, not only of the manner in which the Park is managed, but also of the results and general tendency of its management; for none have visited it more frequently, or more regularly, at all seasons, during the last ten years, than we. Not content with riding or driving whithersoever a horse may go, there is not a pedestrian walk with whose attractions we are not familiar. That we do not make our almost daily visits in any fault-finding spirit, however, may be inferred from the fact that this is our first complaint against those trusted with the management of the Park; although it is not our first article on the subject. More than five years ago we wrote and published an elaborate article entitled "Museums and Botanical Gardens," the design of which was to encourage those in charge of the Park at the time, and all who were in favor of making it worthy of our great city, by showing what had been accomplished in the chief capitals of the old world. We found no fault with any of the commissioners;

not that we regarded their work as by any means faultless, but because, considering the disadvantages under which they labored, in laying, as it were, the foundation of the first great park in the United States, we thought they had acquitted themselves quite as well upon the whole as the most sanguine had a right to expect.

Perhaps it was their politics, some will say, that rendered them so worthy of our sympathy: but all who know us are aware that it is what a man is, and not what party he belongs to, we take into account. Whether a public functionary be a republican, a democrat, or a radical, does not influence us in the slightest degree in estimating his qualifications for the office he holds, or in forming an opinion of the use which he makes of such qualifications as he may happen to possess. For aught we know, or care, the present commissioners are, with one exception, of the same political creed as the former commissioners. In common with all who glance at the newspapers, we are, indeed, aware that Mr. Peter B. Sweeny belongs to the democratic party; we might as well pretend to be ignorant of the existence of the illustrious James Fisk, Jr., or of our equally illustrious quack doctors, as not to know, at least, the avowed political dogmas of that distinguished person.

We are only sorry that he did not confine his attention to the party work he had been used to, and let our beautiful Park alone. Had he done so it is by no means certain that his name would ever have found its way into these pages. This is the first time we have ever printed it, although made aware years ago that Mr. Sweeny boasts of being the manager of the democratic party in New York, and one of our wealthiest politicians. Assuming both facts to be true, we confess we could never understand how he became manager, or how he acquired his wealth.

It is true we have seen him styled in the Herald "Peter *Bismarck* Sweeny;" but it should be known by this time that no editor uses the figure of speech called irony in a style more amusing, to those who can look beyond the surface of

things, than Mr. Bennett; nor is any one more fully aware that nothing can render pygmies more ridiculous than to compare them to giants. But let us assume that the countryman of Burns and Smollett does not laugh in his sleeve when he uses the term "Bismarck" in that sense, but does so in sober earnest, which is assuming a good deal; nay, assuming that there is some resemblance between the two personages, what then? Be it remembered that it is not alone the faculty of acting as the zealous, unscrupulous tool of the despot and spoliator that Count Bismarck possesses in a high degree, for he is equally cunning, greedy, and oblivious of principle in smuggling the most stupid and good-for-nothing of his relatives into positions where they also can fatten on the public fodder, and become millionaires at the expense of the tax-payers.

If the term "Bismarck" is used as a sly allusion to this, then we admit that there is some force in it; but we cannot help thinking that there would be much more force, and more justice, too, in comparing the present head (?) of the Department of Public Parks to his friend, Colonel Fisk, Jr. If the former claims to be a jurist, and the latter claims to be a military chieftain, we think that the legal attainments of the one are pretty nearly on a par with the military attainments of the other; in other words, one is about as good a specimen of a field-officer as his friend is of a counsellor at law. We have no doubt that the latter could defend one for obtaining money under false pretences, or for conspiring with others for that purpose, as ably and fearlessly as the former could command a target company in charging a battalion of fishmongers before "the enemy" had time to arm.

But by all means, then, let the middle name of our Park president be "Bismarck;" we shall be entirely satisfied. We are bound to remember that other personages of somewhat similar calibre, as lawgivers and statesmen, have been elevated to a high pitch of glory by waggish writers. As an example, we need not go beyond the famous Sancho Panza. Cervantes is so

anxious to do full justice to "honest Sancho," especially as the ruler of a certain island, that he prepares himself for the work as follows: "To thee I address myself, O sun! by whose assistance man produces man; thee I invoke to invigorate and enlighten my imagination, so that *my language may keep pace with its subject* and faithfully describe *the government of the great Sancho Panza.*"*

This it will be admitted is as full an "endorsement" of the pretensions of Sancho as ever Mr. Bennett has given of Sweeny. And if the head of the latter has been turned by comparing him to his betters, so we are informed has been the head of the former. But the subjects of Sancho required some qualifications, however trifling, from those who aspired to rule them for they address him thus: "It is an ancient custom here, my lord governor, that he who is appointed to the *command* of this far-famed island shall, on his first taking possession, give answer to some intricate and difficult questions, by which the people are enabled to judge of the capacity of their new governor, and thereby determine whether to rejoice or *grieve* at his arrival."†

We are informed that these people had heard compliments enough paid to Sancho; as high compliments as ever have been paid to Sweeny. The chief difference seems to be that, while the inhabitants of the island of Barataria had the perception to distinguish the language of irony and derision from that of serious, sincere approbation, the inhabitants of the island of Manhattan—at least that portion of them that do most of the voting—take for gospel everything they are told, in an ingenious and lively manner.

This does not prove, however, that Mr. Sweeny is a fit and proper person to have the chief control of the Central Park. Had his rule been confined to the wild animals, then, with a few lessons from Barnum, he might have acquitted himself very well, and might in time have aspired, with some show of justice, to be styled Peter Barnum Sweeny. In the first place, we would

* *Adventures of Don Quixote*, chap. xlv. † *Ibid.*

ot object to give him charge of the whole genus *vulpes*, al-
hough we understand that he is familiar with no nobler speci-
ıen of it than the *vulves vulyaris*, so well known among hen-
rives as the red fox. Nor should we fear that the genus *ursus*,
specially the *ursus horribilis* (grizzly bear), would not receive
ppropriate treatment at his hands, or under his supervision.
'o these we should be willing to add the genus *sus*, including
he *porcus Hibernicus*—as good a specimen of the domestic hog
s we know; and the genus *asinus*, including the *zebra Afri-
ana*, together with the whole family of the *simiadæ*, espe-
ially the baboon and green monkey species.

Some birds (*aves*) we would also place under his jurisdiction,
lthough not those that could be plucked by throwing chaff in
heir eyes, such as the *anseres Hibernici*, vulgarly called Irish
;eese. This interesting but short-sighted species we should
ather keep out of his way; but in their stead we would give
im some specimens of the genus *gallus*, which might include
he *gallina quæstura* (chamberlain's hen), a bird whose chief
haracteristic, according to Pliny and other naturalists, is to set
p an enormous cackle, wonderfully similar to the braying of
ıe donkey, when her maw is so well filled that she can afford
give a few small crumbs to the bantams and goslings at whose
xpense she fattens; whereas, while stuffing herself and her
eedy brood, she is as dumb as an owl at mid-day.

As for plants, we should trust none with Sweeny,
xcept very few of the hardier species, such as the genus
bháisdhe,* the genus *práta*,† and the genus *tri-dhuile*.‡
hese and a few others might receive proper treatment under
ıe rule of "President Sweeny;" not indeed for love of the
eople whose favored plants they are supposed to be, but for
ve of their votes—that is, for love of the golden egg which,
en or goose-like, he makes them lay for him and his friends.

But the question now is: How does Sweeny manage the
entral Park? No intelligent person in the habit of visiting
t who makes any use of his eyes needs any reply to this.

* Irish for cabbage. † Irish for potato. ‡ Irish for shamrock.

But those who are shortsighted, as well as those who live too far away to judge for themselves, may justly be told that no Park involving half so much expense has ever been so grossly mismanaged. We exaggerate nothing when we say that an amount of damage has been done to the Park since spring last, which it would take five years to remedy did the work of the spoiler cease at this moment. We think we hear our sagacious and accomplished naturalists exclaim, with a derisive smile: "Why, he knows nothing about it! he means the pruning, and thinning, and transplanting—what nonsense!" It is very true that we partly mean what you designate by these terms; it is also true that we believe in pruning, thinning, and transplanting; but we believe in them as we do in the use of the lancet, the scissors, and the razor. Does it follow that, because these are useful instruments in skilful, experienced hands, no mischief will be done if almost anybody takes them up at random, and cuts and hacks and mutilates whatever he imagines he can improve in its health or appearance by his newly-acquired art?

Most of our New York readers are aware that almost immediately after Master Sweeny became president of the department of Public Parks he sailed for Europe. He visited several parks in England and on the Continent, and, in taking a hurried glance at each (for Tammany might go to ruin if he was long absent), he observed that some little branches had been lopped off here and there, a few trees transplanted, and a few diseased ones cut down. It is said that a word for the wise is sufficient; but Sweeny did not require even a word. He returned as hastily as he went; and he was scarcely two days back in New York when he began to prepare for a general onslaught on every grove, shrubbery, and tree in the Central Park; his first attacks being on those groups that had begun to afford a delightful shade—one of the most fascinating attractions in a public park, especially in a climate like ours, where everybody longs for it in the summer, "as the hart panteth for the water brooks.

Most persons have heard of the pet-monkey, which, having observed the barber shaving his master, availed himself of the first opportunity to steal the razor and lather-box, in order to practise on the cat and dog, and such other members of the family as he thought might be improved by the operation; but Puss, Tray, etc., not relishing that sort of treatment, fought to be let alone, or sought refuge in flight. In short, Master Simia found that his friends did not care to be shaved; and whether influenced by undue enthusiasm in the exercise of his new accomplishment, or by chagrin at the lack of appreciation for his good intentions evinced by his friends, the poor animal cut his own throat to such an extent that all the doctors in the neighborhood were unable to save his life.

If we learn nothing else from this little incident, it shows us the difference between animals and vegetables. Although the animal is "dumb," he is capable, in general, at least of seeking safety from his enemy in flight, whereas the tree must stand its ground and offer no resistance. Yet the tree, too, has life; it is capable of being wounded, and wounded fatally; *it is capable of contracting disease from bad, ignorant treatment; and the disease so contracted may, and often does, prove fatal.*

The most stupid might understand this, if aware that plants have a veritable circulation, and even respiration, corresponding with those of animals; and if Sweeny were aware of the important effects of those processes on our atmosphere, and consequently on the health of our citizens, we are willing to believe that even he would have paused before carrying the mutilating plan to the extreme extent he has.

We remarked at the beginning of this article, that we should not ask our readers to accept our views on the vitality and growth of plants any further than we might be found able to sustain them by the testimony of acknowledged authorities. First, we turn to "The Vegetable World" of Figuier, and find the two kingdoms compared as follows: "But the respiration of plants is not always the same like that of animals,

in which carbonic acid gas, water, and vapor are exhale without cessation either by day or night. Plants possess *tw modes of respiration;* one diurnal, in which the leaves absor the carbonic acid of the air, *decompose this gas,* and extra the oxygen, while the carbon remains in their tissues; th other nocturnal, and *the reverse,* in which the plant absorl the oxygen and extracts the carbonic acid; that is to sa *they breathe in the same manner that animals do.* The carb which is used by plants during the day is indispensable to th perfect *development of their organs* and the consolidation their tissues. *By respiration plants live and grow."**

It is needless to remark to our readers, that by "plants are meant trees and shrubs, as well as the common vegetabl more popularly known by that name. But another word c this subject from M. Figuier: "The diurnal respiration plants, which pours into the air considerable quantities oxygen gas, happily compensates for the effects of anim respiration which produces carbonic gas injurious to the li of man. Plants *purify the air* injured by the respiration men and animals. If animals transform the oxygen of th air into carbonic acid, *plants take this carbonic acid back aga by their diurnal respiration.* They fix the carbon in the dep of their tissues, *and return oxygen to the air in respiration.*"

Now, as to the circulation corresponding to the circulatio of the blood in animals. This has been demonstrated in th clearest manner by numerous experiments. "If a plant made to absorb colored liquid," says M. Figuier, "or if th *branches* are plunged into the same liquid, it is easily seen tha it does not rise first *either in the bark or pith.* It is in th *wood* or *ligneous body* through which it manifestly takes i passage. This passage takes place through all the ligneo elements,—*cells, fibres, and vessels.* The *anatomical structu*

* *The Veg. World:* Being a Hist. of Plants, with their Botanic Descriptions and Peculiar Properties, etc. By M. Louis Figuier, p. 198.

† *Ibid,* p. 109. See also Linnæus' *Systema Naturæ; sive Regna Tr Naturæ.* Didot, Paris, 1830, pp. 75–80.—De Jussieu, *Genera Plantarum Introduction,* p. 15 et seq.

of these vessels, their large number, their strength in the prostrate filiform and slender stems, which often attain a very considerable length, and which require to be traversed by a large quantity of sap in order to supply what is necessary for evaporation by the leaves—all these general facts *leave no doubt* as to the part which *the wood vessels* play in the *circulation of the sap.**

Referring to the curious and beatiful apparatus of Dr. Hales, an eminent English physiologist, by which these facts are illustrated, Figuier says: "Hales calculated from this that the force which impels the sap in the vine is *five times as great as that which impels the blood through the large arteries of the horse.* Having reached the leaves, the sap comes in contact with the air by the innumerable openings, or *stomates*, which communicate with the air cells and hollow *meatus* in the substance of the *parenchyma.*"†

This sap is just as necessary for the nourishment of the tree as the blood is for the nourishment of the animal; and, as whatever injures the blood, or its vessels, injures the animal, so whatever injures the sap, or its vessels, injures the tree. We do not say that the latter is in general as sensitive and tender as the former; but we maintain that one as well as the others sickens and dies from the treatment of ignorant quacks of the Sangrado type. Before we do anything more, however, than allude, in passing, to the indignation we have felt on different occasions, especially during the last three or four months, on seing dozens of common laborers mutilating the finest trees in the Park, while others stubbed up, or felled altogether, trees whose shade was becoming charming—so gracefully cool and refreshing when the heat is intolerable in every exposed place—we will briefly consider the subject in another light. Let us see what are the views of the best authorities on landscape gardening, and glance, if only for variety's sake, at the views of some of those regarded as the best judges of the beautiful in nature and

* *Vegetable World*, p. 111. † *Ibid*, p. 112.

art. First, we will turn to Loudon, who is the best Engli authority of the present day. Loudon is in favor of skilf pruning for certain kinds of trees; but for no trees wou he allow the Sweeny style. Speaking of close pruning ju diciously performed, he says:

"This mode of pruning is only adopted when the object is to pro- duce stems or trunks clear of branches of any kind of protuberance as in the case of standard trees in gardens, especially *fruit trees*, and in the case of forest trees *grown for their timber*. If the branch cut off *is under an inch in diameter*, the *wound* will generally *heal* over in two seasons, and *in this case* the timber sustains no practical injury; *but if it is larger*, it will *probably begin to decay in the centre*," etc.*

Referring to the milder specimens of the Sweeny style, Loudon proceeds:

"Close lopping, by which *a large wound is produced*, the surface of which *not only never can unite with the new wood* which is formed over it, because, as we have seen, *growing tissue can only unite to growing tissue*, but the wood in the centre of *the wound* will, *in all probability*, begin *to rot* before it is covered over, and, consequently, the centre of the trunk *will be more or less injured*. Even if, by covering the wound with composition to exclude the weather, the surface of the section should be prevented from *rotting*, still there would be a blemish in the timber," etc.†

This, it will be admitted, is sufficiently clear; it would enable any of our readers in the habit of visiting the Park to see whether our complaint is just or not. But we want to satisfy the most sceptical—we desire to convince even those who have the genius to make an empty sack stand, at least for a time, when they take it into their head. It is well known, by all who have travelled, that there are no better landscape gardeners at the present day than the Scotch. We have before us an excellent Scotch work, in several volumes, entitled "Rural Cyclopedia," and edited by the Rev. J. M. Wilson, of Edinburgh. From the article on pruning we extract the following:

"Where pruning is not required to renovate the vigor of *an enfeebled tree*, or to regulate its shape, in other words, in *the case of a healthy tree*,

* Loudon's *Horticulture*. † *Ibid*, p. 340.

; may be considered *worse than useless.* * * *Ignorant cultivators* equently *weaken the energies* of young trees, and cause them to grow p with lean and slender stems by injudiciously *pruning off* the young *de shoots*," etc.*

May we not ask, then, were all our fine trees at the Cenal Park "enfeebled" when its present head "cultivator" ok charge of it? Or must it be admitted that he is an ignorant cultivator?" But another word or two. Some ay pretend that because Figuier, Loudon, and Wilson are en of our own day their authority may be questioned. In der that no such subterfuge can avail in this case, we will rn to old Evelyn, whose *Silva et Terra* has the classic mp, and who has elicited the praises of the greatest modern turalists, including Buffon and Cuvier, especially for his mirable dissertations on the treatment of trees in public rks and gardens. He, also, is in favor of judicious pruning those instances in which pruning seems to be required; but at he has as great a horror as we have ourselves of the eeny style, may be inferred from the following:

"It is a misery to see how *our fairest trees are defaced and mangled by unskilful woodmen* and mischievous borderers, who go always armed ith short hand-bills, *hacking and chopping off all that comes in their way*; by which our trees are made full of *knots, stubs, boils, cankers, and formed branches to their utter destruction.*"†

That "unskilful woodmen" are unsafe persons to entrust ith the care of a public park or garden, will be readily admitted; but they can hardly be said to be more unsafe in that osition than a ward politician, even though the latter may e led by satirically-inclined friends, amused by his vanity, fancy himself a statesman and lawgiver. Be this as it ay, we ask the reader to notice how "our fairest trees are efaced and mangled," and how they are "made full of nots, stubs, boils, and cankers, etc., to their utter destruction." A little further on in the same page Evelyn laments at those ignorant people "have no consideration how those

* *Rur. Cyc.*, Edinburgh, 1852.

† Evelyn's *Silva et Terra*, vol. ii. p. 173.

ghastly wounds mortally affect the whole body of the tree," etc. And that Evelyn understood vegetable physiology as well as landscape gardening, is sufficiently proved by the reasons which he assigns for the "boils, cankers," etc. "It is," he says, "abundantly evident that *all trees inspire and expire,* from pores in their bark as well as their leaves, so that *whatever interrupts either of those processes must occasion disease.*"[o]

Now we venture to say that no impartial reader, aware of what has been done of late at the Park, who has accompanied us thus far, will think that we have deviated from the language of moderation and justice in asserting, at the beginning of this paper, that more mischief has been done to the trees under Sweeny rule during the last six months than can be remedied in as many years. We now add, in the same calm but earnest spirit, that he should be restrained from pursuing his ignorant and destructive course any further. The British parliament has, at different times, enacted laws for the purpose of restraining "ignorant or ill-disposed persons." Besides the well-known statutes 1 George I. and 6 George III., there is still on the statute book of England what is called the Black Act, by which, "to cut down or destroy any trees planted in an avenue, or growing in a garden, orchard, *or plantation for ornament,* shelter, or profit, is *felony without benefit of clergy;* and the *hundred shall be chargable for the damages unless the offender be convicted.*" The Sixth of George III. made the penalty for the same offence transportation for seven years. These laws make no allowance for ignorance or presumption; and if those whose duty it was to restrain the offender failed to do so, either because he was a political ringleader, or for any other motive, they had to pay, themselves, for the damage he had done.

We shall not pause now to inquire what might be the effect of such a law in the present case; but referring to the Black Act reminds us of an incident which may serve as an episode. As we rode along one day, not far from the Ramble, we ob-

[o] *Silva et Terra,* edited by Hunter, vol. ii. p. 182.

served about a dozen persons, all armed with weapons more or less formidable, with which they were making an onslaught on a beautiful group of trees, as if their object had been to provide themselves with fire-wood, or with roofing for their hanties, without any regard to consequences. Approaching within a dozen yards or so, we addressed the nearest in as good-humored a tone as the nature of the work going forward would allow us: "May I ask what are you destroying the trees for?" There was a pause for a moment. The men looked at each other, and after a moment one replied with an expressive grin, "Faith, an' it is that same, sir; but 'tis n't our fault. It's th' ordhers of Misther Swiny himself." "Misther Sweeny, the prasident, you mane," interrupted another, drawing his pipe somewhat abruptly from his mouth. Before we had time to reply in the affirmative a third person, armed with a weapon like a scythe, laughed, and said in Irish, "*Tha thissa karth a Vichael; a ainm fior bu Swiny.*" (You are right, Michael; his true name *was Swiny.*) Another, equally disposed to joke, said, in the same dialect, "*Shay shid ainm Sassenach; a ainm fior shay Mac Finsigh.*" (But that's his English name; his true name is ——.) Here there was a general laugh; but we prefer not to translate "Mac Finsigh" for the present. "It isn't Mr. Sweeny's name I want to inquire about, but what you are doing to the trees." "If it was, thin," says another, "'twouldn't be Misther Sweeny, savin' your presence, but Misther Beesmark Sweeny." "By jabers, Barney, isn't ould Bennett capital at makin' *omadhanes* (fools) of those polititioners wid his dhroll names." "But what of the trees, Mike?" "Well, in ould Ireland the threes wouldn't stand this sort o' prunin', but in the land o' liberty may be 't will be good for them! I'll hould a bet wid any body, that's the *iday!* for did n't Misther Swiny go all the way to Dublin, the moment he was promoted, to see the threes in the Finix Park and the Boar de Bulone, and all them other cilibrated places?" Despairing of receiving any more satisfactory information in that quarter, we thanked Mike, Larry, and

Barney, and proceeded to enjoy our ride in the best way we could.*

Now, leaving the reader to judge for himself as to the amount of injury done to the trees, we proceed to consider what is the effect of the lopping, hacking, stubbing, and felling system on the scenery; and whether shade is to be regarded as essential to the attractiveness of a public park, or the reverse. That nature may be improved by art is admitted by all who have any taste; but the art must not be apparent. The eye must not be offended by the rents and tears of weapons; nature must be kept in mind, and, to use the language of Linnæus, *Natura non facit saltus.* In his essay on the Sublime and Beautiful, Burke very justly says: "No work of art can be great but as it deceives; to be otherwise is the prerogative of nature only."† He was not a mere politician and trickster who has given this opinion, but a statesman and a philosopher. And Walpole, writing in the same spirit, tells us that under the supervision of the intelligent superintendent, who had some knowledge of botany, "The living landscape was *chastened or polished, not transformed. Freedom was given to the forms of trees; they extended their branches unrestricted,*" etc.

But we need not have consulted any more recent or better authority as to the proper care of trees, or what constitutes a

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* Revolving in our mind some of the expressions in the Irish language we had just heard, it occurred to us that Barney knew something about etymology, although there was no evidence that he had ever studied either that or any other branch of learning. On a little reflection we remembered that neither of the letters *w* and *y*, which occur in the name Sweeny, belong to the Erse language, and that the original Irish of Sweeny is *Suibin*, with the prefix Mac (*son of*), which is identical with the Latin *Suidæ*, the name of a family which, though very ancient and highly interesting in some of its characteristics, is held in abhorence alike by Jew and Mohammetan. (Vide Folloly's Grammar of the Irish Language, p. 214.) Happening to see a good deal of rooting just at the moment, and bearing in mind some of the more salient points of Darwin's theory of natural selection in the struggle for life, we had a great mind to return and thank Barney for so curious a lesson in comparative philology, especially as he could possibly tell us why the prefix "Mac" has been omitted in the case of "the prasident;" but lest we might come in contact, by mistake, with some of the "pruning hooks," we thought it best to pursue our researches in some other direction.

† Part II. sec. 10.

beautiful park or garden, than the author of the Æneid; for there is no finer essay on horticulture and landscape gardening in any language than the second Georgic of Virgil. Accordingly it is extensively quoted by the best modern writers on those subjects, including the great Linnæus himself. As for Evelyn, his *Sylva* contains extracts at almost every page from this truly scientific and admirable poem. But it is not alone in his second Georgic that the Mantuan bard celebrates the cool and grateful shade as one of the greatest blessings which the inhabitants of a populous city can enjoy; in the very first line presented to us of his poems he makes Melibœus sing:

Tityre, tu patulæ recubans *sub tegmine fagi*
Sylvestrem tenui Musam meditaris avena.*

Before proceeding further than the fourth line he presents the delightful idea in another form—

Tu, Tityre, *lentus in umbra*
Formosam resonare doces Amaryllida *sylvas*.†

To extract what is appropriate and instructive in the second Georgic were to extract nearly the whole poem. But a line or two will suffice. First, the poet reminds the horticulturist that nature is various in producing trees—

Principio arboribus varia natura creandis.‡

Virgil also warns the ignorant pruner (*putator*) by reminding him that the branches of one tree may turn into another without injury to either—

Et sæpe alterius *ramos impune videmus*
Vertere in alterius.§

Nor does the poet forget to show that trees, like animals, should be treated according to their different kinds and constitutions—not treated all alike after our Sangrado fashion—

Quare agite proprios generatim discite cultus.‖

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* O Tityrus, recumbent beneath the shade of a spreading beech, etc.—*Bucolica*, Ecl. 1.

† O Tityrus, while reposing in the shade teach the trees to resound the name of the fair Amaryllis.

‡ V. 9 § V. 32, 33. ‖ V. 35.

Thus Virgil not only expresses the highest admiration for the shady recesses of the groves as a feature of the landscape grateful to all, but he shows how those recesses may be produced. Still greater, if possible, is the admiration of Horace for the delightful gloom formed by the intertwining trees with their luxuriant foliage. As an illustration of this, we need only refer to his description of his own villa on the banks of the Tiber, the munificent gift of Mæcenas. It charms him to see the vine and the elm embrace each other so closely as to exclude the burning rays of the sun (an amictâ vitibus ulmo); it delights him to proclaim that the breezy hills are separated only by umbrageous valleys.

> Contenui montes, nisi dissocientur opaca
> Valle.*

Cicero, Varro, and Pliny evince equal admiration for the spreading branches, and equal indignation against the spoiler who would lop them off and banish the Dryades with the shades they love. But neither poet, nor botanist, nor horticulturist, ancient or modern, has more eloquently, or more plainly shown what a public garden or park ought to be than Milton. He delights to recur again and again in several books of his Paradise Lost to the scenery of the garden of Eden; accordingly, the chief landscape gardeners of France, Germany, and Italy, as well as England, who have treated the subject since his time, have quoted him as an authority on those subjects. The great English poet delights to tell that even Satan pauses in his diabolical course when he reaches the border where the delicious Garden

> " Crowns with her enclosure green,
> As with a *moral mound* the champain head
> Of a deep wilderness, whose *hairy sides*
> *With thicket overgrown, grotesque and wild,*
> *Access denied;* and overhead up grew
> Insuperable height *of loftiest shade*
> Cedar, and pine and fir and branching palm,
> A sylvan scene; and, as the ranks ascend

* Epist., xvi., Ad Quinctium, lib. 1.

Shade above shade, a woody theatre
*Of stateliest view.**

Even the "sapphire fount," the "crisped brooks," the ient pearl," and "sands of gold," are all enhanced in their uty by being viewed "under pendant shades." Then we told about the plants and flowers

"Which *not nice art*
In beds and *curious knots*, but *nature boon*
Pour'd forth *profuse* on hill, and dale, and plain;
Both where the morning sun first warmly smote
The open field, and where *the unpierced shade*
Imbrowned the noon-tide bowers."†

[t is well known that Milton had made himself acquainted, ır as he could do so by careful study and research, with the charming features of all the famous gardens both of the an- t and modern world, before he wrote a line of his description den. To him the sacred grove of Diana, the garden of Ep- ıs, the paradise of Persia, the suspended gardens of ylon, the Villa Adriana, the floating gardens of Mex- and the villas of Netzahualoyotl and Montezuma, were lly familiar. But it will be seen that to no features ıtial to a park or garden does the great poet—whose ideas he beauties of nature and art are universally and justly ired—attach more importance than to "the thicket over- rn," though "grotesque and wild," "the unpierced e," and "noon-tide bowers."‡ These are the beauties h would cause even the arch-enemy of man to pause re he attempted to destroy them, but whose destruc- as far as it is in his power, is the first care of Mr. r B. Sweeny.

Several generations ago, from the time of Walpole to that ope and Addison, the English had to complain as we have ; still more recently, Mr. Knight has very spiritedly and y protested against

* *Par. Lost*, B. iv. v. 133 et seq. † *Ibid*, v. 241 et seq.
‡ See also v. 291, vii. 527, viii. 304, ix. 439.

"Each secret haunt and deep recess *display'd*
And intricacy *banished with its shade.*"

Nor does he conceal his indignation against the ignorant spoiler, whom he addresses as follows:

"Hence, hence! thou *haggard fiend, however called,*
Thou meagre genius of the bare and bald;
Thy spade and mattock here at length lay down
And follow to the tomb your favorite Brown."*

Had our leading papers so addressed our Brown two or three months since, much mischief might have been prevented. We are convinced that had their principal editors been in the habit of visiting the Park regularly, they would have done so. Surely the veteran who contributed at least as much as any one else to establish the Central Park, would not have looked on in silence had he been aware of the treatment it has been receiving under the Sweeny rule; we are sure that "Bismarck" would have given way to the much more appropriate name of Breun, or Brofy, Bradly, Bradach,† Bunkum, etc., etc. Poor Mr. Raymond, who used to visit the Park almost daily, and take great delight in observing the luxurious growth of the trees—we can well imagine how indignant he would have felt; for he, too, was entitled to a full share of the glory of securing for New York so priceless a boon. Has the Times become indifferent to what was so dear to its able and worthy founder? Can nothing excite the indignation of our other leading daily editors but partisan politics? Has Mr. Greeley no protest to make, even as an agriculturist, against a more deplorable exhibition than the bull in the china shop, and the bear, too—the veritable *ursus horribilis?* Must the World remain dumb because, although aware that it is evidently as absurd, if not as cruel, to entrust Sweeny with the care of the trees and shrubs at the Central Park, as it would be to entrust the wolf with the care of the sheep and lambs, still it is bound to remember that that personage is a very smart fellow at election time,

* *Landscape*, p. 25, ed. 2.

† Vide Foley's *Irish Dictionary*. Dublin. Curry & Co. 1855.

when he boasts that in spite of press or pulpit he carries the Irish vote in his pocket? We would fain hope not; and yet the work of destruction still goes on. No one has less excuse than the Express, for few visit the Park more frequently than Mr. Brooks and his handsome cream-colored ponies. He and Mr. Hastings would be much better occupied in exclaiming "Ringman, spare that tree!" than in going to law with each other; especially as the latter understands Irish ethnology, including the interesting tribes of the *suidæ* and *simiadæ*, better than most other American editors, and ought to understand the dialects of both the mixed and pure breeds. As to the Post, we fear it is too busily occupied in eulogising all books and pamphlets bearing the imprint of wealthy publishers, and watching the seething of the political caldron to see what will turn up, to find time to bestow any attention on such abstract subjects as horticulture and botany. At all events, we are not sure but that its managers regard the transformations recently undergone by the Park as equal to certain recent translations which are said to surpass all others ever made. Then our little luminary no longer shines in that direction; it seems that, unlike the orb from which it borrows its name, it has its dark side, which it occasionally uses as a cloak for its new friends. Hence it is, we suppose, that what was all *blubber* only a few months ago is now all "Brains;" a phenomenon which reminds us of a certain learned professor who spent half his life in denouncing *pork* as a very unwholesome and rather disgusting sort of food, but suddenly discovered, in some mysterious way, that, after all, it was just the thing—better than beef or mutton—especially for persons of delicate constitution supposed to have the scrofulous taint. True, the pork was pork still, and nobody but our philosopher could see that its essential properties had undergone any change.

That our Tammany naturalist has done some good, however, far be it from us to deny. If his wish in doing it was only to oblige two or three of his worthy friends, what of that? It

is proper to say, however, that in speaking of his "friends" we do not mean those said to belong to "the ring." As we know nothing very overbearing, arrogant, or pompous of the latter, there is no reason why we, who have nothing to do with partisan politics, should treat them as if we knew the reverse. Thus, for example, we have never known Mr. Connolly to make any offensive or parvenu-like display in the Park or elsewhere; on the contrary, we have always known him to take his drive as quietly and unobtrusively, though as spiritedly, as any private gentleman. If Mr. Tweed has pursued any different course—if he has exhibited the least ostentation that any one should take umbrage at—we have never witnessed, or been made aware of, the fact. As for Mr. Brennan, no one avails himself of the advantages of the Park more modestly than he, with his plain one-horse wagon and his bow and smile, in passing, for rich and poor alike. If, with this experience, we should seek to cast slurs on those gentlemen, merely because they are public functionaries, or because their political opinions differ from ours, we should reproach ourselves as unfair and unjust.

But everybody in the habit of visiting the Park during the last six months is aware that "Cononel" Fisk and "Dr." Helmbold have experienced considerable difficulty in showing off their coaches-and-six on that part of the eastern drive extending from Eighty-sixth to a Hundred and second street. That citizens so illustrious, and to whom the public owe so much, as the Erie Cononel and the Buchu Doctor should be unable to turn their equipages in any part of the road, so that they could drive up and down as often as they thought necessary for a full exhibition, without running the risk of coming in contact with vulgar one-horse, or, at most, two-horse people, was a hardship which, of course, "Brains" Sweeny was not slow to recognize. We are not aware whether the "doctor" is, or has been, a colleague of his, like the "colonel; however, be this as it may, it is but fair to take into account that it is exactly the same class, *i.e.*, the most ignorant and most

dulous, who do the voting for Sweeny and buy the buchu Helmbold. Ignorance and imbecility are as much the basis the greatness of the one as they are that of the greatness of other. Besides, as one cures all trees and shrubs, Sando like, by lopping off their best branches, or felling them ogether, so does the other cure all men and women, let their ladies be what they may, by dosing them with buchu; and all know that a fellow-feeling makes one wondrous kind. cordingly the decree has gone out, and in due time there l be room enough for Fisk and Helmbold. Let no one comin, when the bills are sent in, that it is dear work, for it will very cheap compared to the "pruning." Supposing the rk of destroying each tree costs $10 (which, it must be adtted, is a moderate estimate), without any regard to the conquences of that destruction, and that the widening of the road its the same amount per square foot, should we not remember that it is better to pay even an exorbitant price for what useful and good, than to pay any price for what is injurious d destructive?

RT. V.—1. *Grave Mounds and their Contents.* By LLEWELLYNN JEWETT. London. 1870.

Antiquities of New York and the West. By E. G. SQUIER. Buffalo. 1851.

Handbook of Archæology. By F. A. WESTROPP. London. 1867.

Travels in Chaldea and Lusiana. By W. R. LOFTUS. New York. 1857.

If, by some future convulsion of nature, man were to be rept utterly from the face of the earth; his cities, his books, s inventions burned to ashes in a grand funeral pyre of the uman race; and, in the time to come, some new genus of

thinking beings were to take his place; it may well be supposed that the *savans* of this new race would fail to recognise man's true rank in the animal creation, and would class him as an advanced species of monkey, a fossil bimaña, with largely developed anterior brain, but with no other evidence of intelligence.

The fact is, however, that ere those archæologists exhausted the subject they would become aware of man's reasoning faculties, and have considerable knowledge of his customs, his mechanical achievements, his modes of thought, his notions of a future life, and of the growth and various stages of his civilization. For, though all surface indications of his prowess should disappear, if but the graves of the race of man remained intact, those structures would yield satisfactory evidence of the earlier social conditions of mankind. While the ravages of war and the corroding tooth of time have left but fragmentary evidence of man's former presence on the earth's surface, the grave remains his most enduring monument, keeping its story almost intact, and yielding us many important chapters of human history.

Over the whole surface of the earth, wherever man has attained to a certain degree of mental progress, there has been manifested a desire to preserve and to do honor to the bodies of the dead, always mingled with some superstitions connected with the sepulchral rites; and monuments to the dead remain the most widely spread and the most massive of human works.

Thus modern Egypt is a vast cemetery of the populous kingdom of the Pharaohs. The late discovered cities of ancient Chaldea are but huge grave mounds. Over all the eastern continent the cemeteries of buried nations are found; while some of the most extensive works of man in the western continent seem to have been erected as tombs. In fact, our knowledge of the existence and condition of some races depends almost exclusively on their graves; as, for instance, the so-called Celtic inhabitants of western Europe; the

vanished race whose graves are found on the Kirghiz steppes of northern Asia, and the pre-historic inhabitants of the United States territory.

These widely scattered graves present great diversity of form and character. Their contents display a still greater diversity. It is our purpose to make a brief review of their various peculiarities and of the evidences which they display of the social conditions and usages of the vanished nations of the far past. There are found two distinct species of sepulchre, one or the other of which each nation has adopted, and of which instances remain reaching from the rudest to the most highly developed form. These two are the *tumulus* or sepulchral mound, and the rock excavation. As each of these is an extensive study in itself, we will consider them separately.

The practice of raising *tumuli* over the bodies of the dead is of the most remote antiquity. The original form of the tumulus was probably similar to its modern form, being simply the oblong heap of earth displaced by interment. The desire to do honor to the illustrious dead caused the growth of this heap into the huge mounds which are found in all parts of northern Europe and Asia, and throughout extensive regions in America. Some of these are partly natural, but others of immense size are known to be wholly artificial, and must have been erected by the united labor of whole tribes.

The forms of tumuli are much diversified. The oldest resemble modern graves, except in their gigantic size, and often display a depressed centre, with an elevation at one extremity. But the common form is the circular mound of various degrees of elevation, the latest forms being broad and low, and somewhat surrounded by a circle of standing stones. A form frequently seen in Sweden, and occasionally occurring in Scotland, consists of an oblong mound terminating in a point at each end. This has been called the *ship-barrow*, and is supposed to form the sepulchre of renowned sea-warriors of old.

As the British islands are peculiarly favored by the num-

bers and diversity of their grave mounds, which have been industriously studied by a succession of zealous antiquaries a description of their characteristics will go far to elucidate the burial customs of the ancients. England displays what we may call three distinct layers of ancient graves, the latest being those of the Anglo-Saxons, the next those of the period of Roman occupation, and the oldest those which have been called Celtic, but of whose real date and the race of whose builders we are ignorant. To these most ancient graves we will devote our chief attention. They have been formed with such care that the skeletons and relics contained in them remain in many cases intact, to tell us their story of the remote past when the race of barbarians flourished whose history is unattainable from any other source. These earliest mounds are mostly found in the mountainous districts of the land; among the hills and fastnesses, of whose natural defence their builders probably availed themselves. Those of the two later series are found on hill and plain alike. "The situations chosen by the early inhabitants for the burial of their dead were, in many instances, grand in the extreme. Formed on the top of the highest hills, or on lower but equally imposing positions the grave mounds commanded a glorious prospect of many miles in extent, while they could be seen from afar off in every direction by the tribes who had raised them."*

To these tribes they had become landmarks, and they were doubtless used by them for places of assembling. In Dorsetshire, the early graves abound on the lofty Ridgeway hills. They are found on the high lands of Yorkshire and Cornwall. In Derbyshire, they exist throughout the mountainous district known as the High Peak, which occupies nearly half the county. These mounds are known by various local terms, *Barrow* being the term in most general use; *Low* is almost universal in Derbyshire, Staffordshire, and other districts, *Fump* is used in Gloucestershire, and *Hone* in Yorkshire.

* *Grave Mounds and their Contents*, p. 3.

The simplest form of the barrow is a plain earth heap raised upon the interment. Others are composed of stone, rudely heaped into a great mass, and usually capped with a covering of earth. In other cases stone and earth are combined to form the mounds. One barrow, on Lord's Down, in Dorsetshire, which is eighty-two feet diameter and fourteen feet high, consists of alternate layers of chalk, rubble, and earth, the mound exhibiting six successive alternations, each of which has served as a grave. The interments were usually made in cists, which are sometimes excavated in the ground, but generally formed by surrounding the body with a circuit of large, rough stones, forming a chamber, which is covered by one or more cap-stones, above which the mound is heaped.

The buried body was usually laid on its side, in a contracted position, so as to occupy as little space as possible. In a few cases it has been found extended, or in a sitting posture. There are evidences that it was occasionally laid upon, and covered with, fern leaves, beautiful impressions of these leaves being marked on bronze weapons in connection with the corpse. In certain instances two bodies have been buried together. Thus two skeletons have been found laid face to face, and encircled in each other's arms; and cases have been found where an infant lies wrapped in the arms of its dead mother, thus touchingly illustrating the existence of the most sacred of human feelings in those remote barbarians.

The custom of burning the dead was frequently practised, as it was in after ages by the Roman and Saxon lords of the land. The remains were gathered into a small heap on the ground, wrapped in a cloth or skin; or were enclosed in a cinerary urn, either inverted or covered with a stone. The burning took place near the mound, the ground being frequently found hardened to a considerable depth by the intense heat employed. "In some instances lead ore has been so completely smelted by the heat that it has run into the crevices of the soil, and looks, when dug out, precisely

like straggling roots of trees. May not the discovery of lead be traced to this source?"*

The stone cists so frequent in mounds are usually formed of rough slabs of limestone, granite, or other neighboring rock, set on edge so as to form an irregular compartment, and covered with a large cap-stone, with occasionally a flooring of flat stones for the body to rest on. Some barrows contain several such cists. In one case the remains of thirteen individuals were found in a single cist. It was paved with limestone, and formed of four huge stones six feet long, five wide, and four deep. In other instances coffins hollowed from tree trunks have been employed. The simple cist is in certain cases replaced by large stone chambers.

"In most instances the mound itself has been removed and the gigantic sepulchral chambers alone left standing. This removal has been made by the destructive march of agricultural progress, or in other cases doubtless with the hope of finding treasure beneath. When the mounds have been removed and the colossal megalithic structures allowed to remain they have an imposing and solemn appearance, and seem almost to excuse the play of imagination indulged in by our early antquaries in naming them cromlechs, and in giving to them a false interest by making them out to be 'Druids' Altars,' altars on which the Druids made their sacrifices. These same authorities have gone so far in their inventions as to affirm that when the cap-stone was lower on one side than another it was so constructed that the blood of the victim might run off in that direction and be caught by the priests, and that when the cromlech was a double one, the larger was used for the sacrifice, and the smaller for the Arch-Druid himself while sacrificing. Researches which have been made in recent times show the absurdity of all this, and prove beyond doubt that cromlechs are simply sepulchral chambers denuded of their mounds. In several instances they have been found intact, and—these mounds being excavated—have been brought to light in a perfect state."†

The "Lanyon Cromlech," which was unearthed by a farmer, who dug away for agricultural purposes the mound of soil covering it, is now the wonder of its district. It consists of three huge upright stones (a fourth having fallen) which sustain an enormous cap-stone, about eighteen and a half

* *Grave Mounds and their Contents*, p. 31. † *Ibid*, p. 50.

feet long by nine wide, and computed to weigh about fifteen tons. Near Saumur, France, is a cromlech called locally the Bagneux Fairy Rock, whose huge cap-stone is nearly twenty-three feet square and over three feet thick, its estimated weight being one hundred and twenty tons. How such mighty blocks were lifted by a race of barbarians, in an age antedating any known use of machinery, is an undetermined mystery. That they were lifted by any simple system of leverage we can scarcely believe, while the possession of more powerful means seems inconsistent with the character of the relics found in the tombs of their builders.

An advanced form of the barrow consists of a large central chamber, connected by a stone gallery with the exterior. The most remarkable of these is the great tumulus at New Grange, Ireland. It consists of an immense mound, seventy feet high and nearly three hundred feet in diameter, entirely built of stones and coated with earth. A circle of enormous upright stones, of which but eleven remain, originally encircled it. The largest of these projects eight feet above ground, and is seventeen feet in circumference, weighing over seven tons! The gallery leading into the interior of the mound is about fifty feet long. It is composed of enormous blocks of stone, placed side by side on end, and roofed by similar stones; toward the inner chamber its extent gradually increases till it becomes eighteen feet high. The chamber is cruciform in shape, the sides and top of the cross being formed by recesses, some of whose huge stones are covered with a great variety of carvings.

In a similar galleried tumulus in one of the Channel Islands, the stones composing the gallery are closely carved in lines and patterns which have been described as very similar to the patterns tattooed on their faces and bodies by the New Zealanders.

This description of chambered tumulus has been found in other countries. In Denmark they are called giants' graves. They are frequent in Brittany, and are found throughout the

north of Europe. But in the instances in Ireland and the north of Scotland a superior feature appears in the employment of the horizontal or "Cyclopean" arch. This is found in the underground chambers, in the chambered cairns in every part of the north of Scotland, and in the great barrow at Maeshowe, in Orkney. It also occurs in the underground chambers of the Irish raths, and in the cairns of New Grange and Lowth, on the banks of the Boyne. This primitive arch is formed by stones which successively project, causing two opposite walls to gradually approach till they meet at the top, and are covered with a horizontal cap-stone.

The most celebrated instance of this arch is one which comes fully within our purpose, as there is reason to believe it was built for a tomb. It is the remarkable structure known by the local name of Agamemnon's tomb, near Mycenæ, Greece. This is a great chamber, covered with earth exteriorly, but within presenting a lofty dome, of bee-hive shape, forty feet high and fifty feet in diameter. It is built of massive blocks, which successively over-lap each other till they meet at the top, the projecting corners being subsequently cut away to complete the elliptical curve of the interior. On one side is an entrance to a small rectangular chamber hewn out of the rock, resembling the recesses at New Grange. The lintel of the doorway leading into this building is formed of a single huge stone, twenty-seven feet long, seventeen wide, and four feet eight inches thick, weighing one hundred and sixty-four tons, thus yielding a striking instance of the power of lifting possessed by the pre-historic architects.

Isolated stone circles are not unfrequent, and vary greatly in size and character. They are believed in most cases to have been formerly connected with mounds, which have been levelled. In the cases of the huge constructions at Stonehenge, Abury, etc., the purpose was probably, though not certainly, different.

The relics found in these barrows are more interesting than the mounds themselves; showing, as they do, the art and in

ements, and the degree of civilisation of their builders. hey consist largely of pottery. In fact, pottery seems pecially devoted to the dead. Scarcely a grave-mound ists throughout the earth of whose contents it does not, in me form or other, form the chief constituent. The pottery f the Celtic barrows is of rude construction, usually hand-ade. It is formed of the coarse clay of the district where he barrow is erected, as if made on the occasion of the neral; and is probably burned in the flames kindled to con-ume the corpse, in the cases where cremation has been ractised. It is made extremely thick, but is occasionally ather elegant in form and highly ornamented. The orna-nentation is usually performed with twisted thongs, which re pressed into the soft clay, in circular and diagonal lines, rming in some cases a highly complex pattern.

The large cinerary urns are often accompanied by smaller essels, which are supposed to have contained food, in accord-ce with a superstitious custom displayed by many bar-arous nations. These vary from very rude to elegant apes and ornamentation. A third form of vessel found obably served as drinking cups. These are from six to ne inches high, and display the highest artistic skill of this ce. They are elaborately ornamented, the whole surface ing covered with indented lines formed by the twisted ng, which compose intricate and often beautiful patterns.

Among other articles found are stone "celts" or adzes, mmer heads, mauls, etc. These celts are often ground ry sharp, their form being somewhat like that of the mus-l shell. The hammers are occasionally finely finished. ere are also found stones which seem to have been used for inding corn. Flint implements are numerous and often of quisite workmanship. Some of the arrow-heads are pointed d barbed as elegantly as if made of metal. Flint dagger-ades are chipped till sometimes but three-eighths of an inch ick in the thickest part, and are worked with the utmost cety to a cutting edge.

Numerous ornaments of jet have been found, comprising beads, necklaces, studs, rings, etc. Some of these are of great beauty. One elaborate necklace of beads and other jet and bone ornaments had in all four hundred and twenty separate pieces.

Various implements formed of bone have also been found, and bronze articles of various kinds; such as daggers, celts, awls, pins, etc., showing that this race was emerging from the stone into the bronze age of European history. Probably, however, these barrows indicate a very long period of time, in which many changes in civilisation may have occurred. Articles in gold, and coins, are extremely rare in the mounds, though often turned up in their neighborhood.

The graves of the Roman period in England furnish abundant specimens of fine pottery, displaying the utmost variety in shape and ornamentation. What is known as the Durobrivian ware occurs in great quantities. The location of the potteries in which this ware was made has been discovered. They are found throughout an extent of twenty square miles, some of the kilns yet remaining perfect. This ware varies from a blue to a reddish brown color. It is formed on the wheel, and highly ornamented with scroll-work, and with hunting, gladiatorial, and other scenes, which are full of information in regard to the public and private life of the Roman citizens. Mythological subjects, also, are a favorite ornament.

Besides the product of several other British potteries, the continental Samian ware is plentifully found. This is a peculiarly fine, close-textured, and richly colored red ware, very hard and brittle. It is of an endless variety of forms, some of which are plain, some ornamented with figures and foliage. The borders are often elegant in design and finish, presenting a scroll-work formed of leaves, flowers, and fruit, enclosing paintings on a great variety of mythological and domestic subjects.

These Roman tombs also yield beautifully worked glass

ware, bronze and iron weapons, and, among personal ornaments, an immense variety of fibulæ; bracelets in bronze, silver, and gold; gold necklaces, mirrors of polished metal, etc.

The barrows of the Anglo-Saxon are smaller than those of the two preceding periods, but are rich in remains. Burial both by inhumation and by cremation was practised by this, as by the Celtic and Roman races. The pottery found is nearly all in the form of cinerary urns. It is hand-made and rudely finished, though better burned than the Celtic. Glass drinking vessels, with round bottoms, such as our roystering ancestors used, to prevent their guests from replacing them on the table until emptied, are found in their graves. There are great numbers of weapons and personal ornaments. Among the latter are elegant fibulæ, and beads and necklaces of glass, amber, and other materials, many of which are extremely beautiful. Some circular fibulæ have been found of magnificent workmanship for such primitive artificers, forming silver and gold brooches, wrought in elegant patterns of gold chainwork, scroll, and other ornaments.

We have described the British grave-mounds at considerable length, as they go far to illustrate those of other countries, burial customs of very similar character being discovered in the most widely separated districts. There are, however, peculiar features seen in some countries essentially different from the ordinary form of the barrow. Thus in Sweden are tumuli presenting a square enclosure of upright stories with a conical barrow in the centre. Surrounding this is a circle of upright stones, midway of its height is a second circle, while a third ring encircles it near the summit, on which summit is a fourth group of stones. There are several other varieties of tumuli, and numerous stone enclosures of very varied character. Some of these are square, others circular or triangular, with large stones occurring at regular intervals, and occasionally an avenue of approach composed of upright stones. The barrows are described by antiquaries from the varied character of their

contents, respectively to the stone, the bronze, and the iron ages, forming the chief remaining monuments of undoubtedly a very long period of pre-historic time.

Etruria is remarkable for the vast numbers and interesting character of its tombs. Thousands of circular tumuli are here found, chambered within, and with a low retaining basement wall without, above which is a conical mound of earth. These chambers are either built above ground, or are excavated in the tufaceous rock, which is common throughout the Etruscan territory. Among the contents of these are numerous bronze utensils. Other chambers are of a more primitive character, strongly resembling the British cromlech. These are rude graves, sunk a few feet, and lined with rough upright slabs, which are capped with one enormous stone, the earth mound which originally covered them being in many cases washed away.

Among the most remarkable of these Italian tumuli is that known as the Regolini Galassi tomb, at Cervetri. It contains two chambers covered with a pointed arch roof, with horizontal lintel at top. The use of this antique arch is evidence of its great age. The outer chamber had contained the body of a warrior, near whose bronze bier were a number of beautifully embossed shields. In the inner chamber was a beautiful sacerdotal breast-plate, with other articles of pure gold found in the ashes of the corpse. Another noted tumulus is that of La Cocumella, at Vulci, which is a vast earth mound of two hundred feet diameter, and has been about one hundred and fifteen feet high.

In Greece, also, the most ancient tombs are tumuli. Some of these are still visible on the plain of Troy, a site where, in the vivid verse of Homer, we behold them rising over the slain heroes of ancient Greece. On the summit of these mounds were usually placed pillars, or upright stones, called *stelæ*, bearing the names of the dead. Lycia, in Asia Minor, is remarkable for its tumuli. The largest of these has a circular base of three thousand seven hundred feet circum-

ference, the native rock being levelled in some parts and masonry supplied in others, till a platform is formed sixty feet higher than the lowest ground surrounding. The burial chamber is built on this platform, and is covered with earth, rubble, and concrete to the height of one hundred and forty feet. At the summit of the mound is ornamental masonry work.

Atkinson, in his travels through northern Asia, found numerous ancient mounds on the desolate steppes of the Kirghiz. He describes one of these in a valley of Chinese Tartary as a striking object, about one hundred and fifty feet high, steep, and regularly formed. The builders of these tombs are utterly unknown. Describing the valley of the Actou, in the mountain region near Lake Balkash, he says: "Here there are many tumuli, some of them large; from their numbers I am induced to believe that at one period this country has been densely populated."* There are here, also, many ancient canals, used formerly to convey water from the mountains for purposes of agriculture. Yet this country now gives but meagre sustenance to the herds of the Kirghiz nomades.

Other writers credit these tumuli to the Scythians, together with those found abundantly over the plains of Russia and southern Siberia. Herodotus describes at length the mode of Scythian burial. He tells us that "they strangled the groom, cook, and most confidential servant of the king, whose bodies they placed round the dead; they slew horses, also, and deposited with him the first fruit of all things, and the choicest of his effects, and finally some golden goblets, for they possessed neither silver nor brass. This done, they heaped the earth above with great care, and endeavored to make as high a mound as possible."†

The richness of these barrows is said to be extraordinary, and Strahlenberg relates that the local governors of Siberia used formerly to authorize expeditions "to visit and ransack

* *Oriental and Western Siberia*, p. 485. † *Melpomene*, lxxi.

the tombs,"* they reserving a tenth of the spoils. In the second volume of the "British Archæologia" is an account of the opening of one of the large tumuli in southern Siberia:

"After removing the superincumbent earth and stones, three vaults, constructed of unhewn stones and of rude workmanship, were discovered. The central one was largest, and contained the remains of the individual over whom the tumulus had been erected. It also contained his sword, spear, bow, quiver, arrows, etc. In the vault at his feet were the skeleton and trappings of a horse; in the vault at his head, a female skeleton, supposed to be that of his wife. The male skeleton reclined against the head of the vault, on a sheet of pure gold, extending from head to foot, and another of like dimensions was spread over it. It had been wrapped in a rich mantle, studded with rubies and emeralds. The female skeleton was enveloped in like manner; a golden chain of many links, set with rubies, went round her neck, and there were bracelets of gold upon her arms. The four sheets of gold weighed forty pounds. All the Scythian barrows contain numerous relics of art, ornaments of gold, silver, and precious stones, weapons and implements of war, domestic utensils, mirrors, images and idols, vases of metal and pottery, grains of the millet kind," etc.†

We thus perceive in nations of greatly diverse origin and widely separated localities a striking similarity of funeral customs. Alike in tribes of the Aryan and of the Turanian families we see the slight heap of earth raised by interment, growing into the great circular mound of earth or stone, with which these primitive nations sought to render their dead chieftains memorable to future ages. In like manner, the slight excavation made to contain the body expanded into the massive stone sepulchre of the cromlech, and culminated in the great arches and galleried chambers of New Grange and other places. So the slight wall built round the base of the mound, of upright stones filled between with loose rubble masonry, grew into the circles of huge upright blocks known as "Druids' Circles," and possibly originated the idea of the grand erections of Stonehenge, etc.

We find all these races practising alike the funeral rites of

* *Siberia*, p. 366.

† *Antiquities of New York and the West*, p. 200.

inhumation and of cremation, and using great sepulchral urns of earthenware to contain the remains of the burned body. In all races pottery seems to have been made at a very early period, probably immediately succeeding that first display of the manufacturing spirit which produced the flint weapon. It is, indeed, an art readily arrived at, even by low intelligences. The natural excavation in clay, partly baked by the sun, and filled with rain water, doubtless gave the idea to some primitive housekeeper to form an excavation with the hands, and finally to isolate the hollow clay and harden it in the sun. These first vessels would probably resemble in shape the vegetable bowls and pitchers, obtained ready-made from the trees. It was probably long before accident or design led to the employment of artificial heat to harden their clay vessels. The tombs of various races contain ware of every degree of finish, leading from the extreme rudeness of shape and slight degree of firmness of the work of primitive potters to the elegance of shape and intense hardness of the Samian ware found in the Roman tombs. So from the thick and coarse hand-made ware, ornamented with simple lines and incisions, to the perfected work of the potter's wheel, richly enamelled and painted, there are many grades of advancing improvement, and the character of the pottery found in any grave is our best remaining test of the grade of civilisation of its occupants.

The custom of burying with the dead their most valued possessions, along with food vessels and drinking cups filled for the use of the departed spirit, seems to have been widely observed. In some races it extended to the slaughter of favorite animals, and even the servants and wife of the deceased, evidencing not alone a wide-spread belief in a future state of existence, but that, in their minds, the future life of the departed was a true counterpart of the earth life, and the valued possessions of the living would be of essential importance to the dead in the world beyond the grave.

An examination of the burial customs of Semitic nations

yields essentially the same results, though differing in particulars. In the extensive marshy district at the junction of the Euphrates and the Tigris, and extending a considerable distance north between the rivers, are still found the ruined cities of ancient Chaldea, a nation which preceded the empires of Babylonia and Assyria, and was already in its decadence when Abraham migrated from one of its cities to found the kingdom of the Jews.

These ruins consist of huge, shapeless mounds, in which, on excavation, are found the remains of walls, built of sun-dried bricks; but they are peculiarly distinguished by the immense numbers of the dead contained in the mounds. In the whole region of ancient Assyria no positive trace of an Assyrian sepulchre can be found, and the probable conjecture has been made that, long after the decay of Chaldea as a nation, the sites of its cities may have served as sacred burial places for the nations of the Euphrates valley. These nations originated in colonies from Chaldea, and may well have retained a hereditary love for their fatherland, and the desire to rest in death in the sacred locality to which fate forbade their return during life. The modern Persians still retain the custom of bringing their dead to a sacred burial place in this region. They are brought in great numbers to the tomb of Ali, near Bagdad, for interment, some five thousand to eight thousand dead bodies being annually transported on camels to this locality. A similar custom could be much more readily practised by the Assyrians, who had the waters of the river for their highway to the grave.

The sites of these old cities are thus vast cemeteries. In one place a great terrace of sixty feet elevation seems entirely composed of graves. Mr. Loftus dug into it to the depth of thirty feet, still exhuming skeletons, and judged that, in all probability, they extended to the bottom. The site of one of these cities, now called Warka, is especially a city of the dead, interments in countless myriads having been made there. These dead bodies are found enclosed in a

ariety of receptacles, each probably the fashion of a distinct eriod. One of the most common of these, yet from its osition in the mounds judged to be among the oldest, is a p-shaped urn, lined with bitumen, in which the body was laced in a contracted position, the urn being usually covered ith bricks. The forms of funereal pottery found are, how-ver, almost endless. One curious form is of the shape of an val dish-cover, of sufficient size to contain the body, doubled p so as to occupy the least possible space. A later form of offin occurs in such vast numbers as to make up extensive ounds of itself. This peculiar coffin is a vessel of glazed arthenware, shaped like a slipper, the body being introduced t the oval opening on top, which was then closed, an opening eing left at the top for the escape of the gases of decompo-tion. These strange coffins are of a blue color within, but xteriorly of a beautiful green hue. Their surface is divided y lengthwise and transverse ridges into a number of squares, ach containing an odd raised figure, standing with extended gs and arms akimbo, the head being covered with a pecu-ar head-dress.

These coffins are thinly covered with earth, so thinly as o countenance the supposition that they were deposited in pen layers, and gradually covered by the action of the inds. Layer is thus placed upon layer till the numbers are ountless. A great variety of relics accompany these inter-ments. Rings, armlets, and other ornaments are found of old, silver, brass, copper, and various other materials. Earthen drinking-vessels and lamps and glass lachrymatories re also discovered, with a great variety of small terra-cotta gures. These figures comprise warriors, civilians, and arious idols. Many of the last mentioned represent the As-yrian Venus. They are generally rudely formed, but in some ases the outlines of the head and features evidence a skill orthy of Greek art.

This custom of mound-burial, so general throughout Europe and Asia, forms also one of the most prominent

features of American antiquities, tumuli being common over the wide space from British America on the north, to Chili on the south. The ancient inhabitants of the territory of the United States buried also in extensive cemeteries, many of these being found throughout the western states. Some of those cemeteries are of great extent and contain countless numbers of human skeletons. The graves are usually lined with flat stones, and occur in regular ranges. As an illustration of the vast numbers of the dead, as many as one hundred and ten skeletons have been taken from an excavation seventy by sixty feet, and four feet deep. The limestone caverns of the west were also used as places of sepulture, some of these containing a great abundance of human bones. The mounds erected by this ancient people are excessively numerous. Squier estimates that the state of Ohio alone contains not less than ten thousand mounds, some of these, of course, small, but many of them of great size.* These mounds were erected for various special purposes, the object of many of them being undoubtedly sepulchral. Of these sepulchral tumuli, the largest is the celebrated mound at the mouth of Grave Creek in Virginia, which measures one thousand feet in circumference by seventy feet high. In opening one of these mounds, in the valley of the Scioto river, —its dimensions being twenty-two feet high by ninety feet base—

"At ten feet below the surface occurred a layer of charcoal from two to six inches in thickness. It seemed to have been formed by the sudden covering up of the wood while burning, the trunks and branches retaining their form, though entirely carbonized. At the depth of twenty-two feet, and on a level with the original surface, immediately under the charcoal layer, was a rude timber framework, now reduced to an almost impalpable power, but its *cast* still retained in the hard earth. Within this rude coffin was found the remains of a human skeleton. It was so much decayed that it crumbled to powder under the slightest touch. Around the neck of the skeleton, forming a triple row, were several hundred beads, made of ivory or the tusks of some animal. A few lamina of mica were also discovered, which complete the list of

* *Antiquities*, p. 295.

icles found with this skeleton. In other cases bracelets of copper l silver, beads of bone and shell, mica plates and ornaments, stone truments of various kinds, etc., are found with the skeletons. In ry instance falling within our observation, the skeleton has been so ch decayed that any attempt to restore the skull, or, indeed, any tion of it, was hopeless. Considering that the earth around these letons is wonderfully compact and dry, and that the conditions for ir preservation were exceedingly favorable, while, in fact, they are nuch decayed, we may form some estimate of their remote antiquity. the barrows and cromlechs of the ancients Britons entire and well served skeletons are found, although having an undoubted antiquity eighteen hundred years."*

Mounds are also found throughout our western territories, d are numerous in Oregon. They occur in Mexico, but s doubtful whether their purpose was sepulchral. Where iumation was practised, the body was placed in chambers of ne or brick, in a sitting posture, accompanied by ornaments d professional implements. Bernal Diaz relates that a anish officer, named Figuero, occupied himself at the time the conquest "in discovering the burial places of the Caques, and in opening their graves for the sake of the golden naments which the inhabitants of the olden times were accustomed to bury with their chiefs. This employment he prosuted with so much vigor and success, that he collected er one hundred thousand dollars' worth of gold."†

Sepulchral mounds abound in Central America; "in the cinity of the ruins of Ichmul, in Yucatan, they are particurly numerous, covering the plain for miles in every direcn."‡ In these are found chambers, with skeletons in a sitng posture, having small vessels of pottery at their feet. errera speaks of abundance of graves in Honduras, "so anent that large trees were growing over them, and within them as an immense quantity of gold. These graves were very agnificent, adorned with broad stones and vaults, in which ie dead body was laid; and all their wealth, jewels and arms, omen and servants alive, with good stores of provisions and

* *Antiquities*, p. 320. † Lockhart's Diaz, vol. ii. p. 322.
‡ *Antiquities*, p. 190.

pitchers for their liquors, which denoted the knowledge they had of the immortality of the soul. The dead were buried sitting, clothed, and well armed."* Mr. Stephens excavated a mound near San Francisco, Yucatan. It was built with square stone sides, four feet high, the top being rounded off with earth and stones. Within it he found a skeleton, in a contracted position, and covered with a large flat stone. With it was a large vase, its mouth closed with a flat stone.

In South America tumuli are of frequent occurrence. In Peru they are numerous, greatly resembling those of the Mississippi valley. Their height ranges from forty to fifty feet, though some are more than one hundred feet high. In some localities they are very abundant, these seeming to have been districts made sacred by the presence of a temple or other cause. Within the mounds, on the original surface of the ground, chambers of stone, brick, or timber appear. Sometimes there are several of these with connecting galleries. The bodies were usually buried in a sitting posture, and accompanied by a great variety of articles.† Some of these mounds contain great quantities of treasure. One opened in 1576 contained, according to Humboldt, gold amounting in value to five million francs.

These examples will serve to show the general prevalence of the tumular form of commemorative monument; nations separated by half the circumference of the earth erecting mounds strikingly similar in shape, and evidencing in their contents similar forms of belief in regard to the future. In some few countries, characterized by a more advanced civilization, we find the conical mound developing into the stone pyramid, the culminating point of this form of monument. The pyramid was not peculiar to Egypt, but was employed by many ancient nations. The Etruscans, so remarkable for the number and variety of their tombs, employed the pyramidal structure, in which they were imitated by the Romans. Pliny speaks of the tomb of King Porsenna as a rectangular mo-

* Herrera, vol. iv. p. 221. † *Antiquities*, p. 192.

ument in masonry, three hundred feet wide and fifty high. On each corner and in the centre of the square basement stood a pyramid seventy feet wide and one hundred and fifty high.

Pyramids existed in Greece from a period of remote antiquity, the best preserved being that of Erasinus, near Argos. It is built of large irregular blocks, forming an example of the Cyclopean or polygonal masonry.

There has been much discussion as to the purpose of the Egyptian pyramids, but it is now generally admitted that they were tombs. If so, the great pryamid is certainly the tomb of tombs. It is somewhat remarkable that the most massive work ever achieved by the hand of man (if we except the Chinese wall), a mountain of hewn stone seven hundred and fifty-six feet in base and four hundred and eighty high, its solid contents being eighty-five million cubic feet, should have been erected for a sepulchre, and stranger yet, that of the dead king who had sought to render his reign immortal, we have only with great difficulty satisfied ourselves as to the name, and beyond the name are almost utterly ignorant.

The second description of tombs to which we have alluded, the rock excavation or underground structure, has not the wide range of the tumular erection, though minor examples of it, either isolated or in combination with tumuli, occasionally occur in most of the countries mentioned. The most striking examples of this species of tomb, however, are those occurring in south-western Asia, in Egypt and Italy, and to these we must confine our attention.

That remarkable people who have made the banks of the Nile wonderful with their temples and pyramids, equally excite our admiration and surprise by the extent and grandeur of their rock-hewn tombs, which are, moreover, important as yielding us fuller information in regard to the character and grade of their civilisation and of their social condition, than has been obtained from all the historical records elsewhere extant.

The origin of this species of sepulchre lies undoubtedly in the primitive custom of burying the dead in natural caverns;

a custom of which there are examples known probably far more ancient than any existing barrow. Thus caverns have been found at various points in France and Belgium which have served as sepulchres for that remotely antique race of savages whose period is classed by modern archæology as the first stone age, and is considered by prominent investigators as immediately succeeding the glacial epoch of geology, a period reaching back in time far beyond the limits of ordinary chronology. The celebrated Neanderthal skeleton, in regard to whose age and intellectual grade there has been so much controversy, was likewise found interred in a natural cavern. Numerous other instances might be adduced of the extreme antiquity of this mode of sepulture.

At what period man began to imitate the workmanship of nature, by excavating artificial caverns in the rock for the interment of his dead, it would be impossible to declare. We find him, however, in Egypt, at a date not long succeeding that of the erection of the pyramids, hewing tombs in the living rock only less wonderful as works of mechanical skill than is the Great Pyramid itself, and more interesting to us for the suggestive variety of their contents.

The most remarkable of these tombs were those excavated for the Theban kings of the eighteenth and nineteenth dynasties. These began to be excavated as soon as the monarch attained the throne, and year by year were hewn deeper into the rock, being painted and variously decorated as they proceeded, until brought to a sudden termination by the king's death. They thus became monuments both of the magnificence and of the length of his reign. Articles of the most costly character have been found in these tombs. Their entrances are of the plainest description, the decoration being applied almost exclusively to the interior.

"Nothing can exceed the magnificence and care with which these tombs of the kings were excavated and decorated. Their entrance, carefully closed, was frequently indicated by a façade cut on the side of the hill. A number of passages, sometimes intersected by deep wells

and large halls, finally lead, frequently by concealed entrances, to the large chamber where was the sarcophagus, generally of granite, basalt, or alabaster. The sides of the entire excavation, as well as the roof, were covered with paintings, colored sculptures, and hieroglyphic inscriptions, in which the name of the dead king was frequently repeated. The splendor of these works and the richness and variety of their ornamentation exceed all conception ; the figures, although in great numbers, are sometimes of colossal size ; scenes of civil life are mingled with funeral representations; the labors of agriculture, domestic occupations, musicians, dances, and furniture of wonderful richness and elegance are also figured on them. On the ceilings are generally astronomical or astrological subjects. One of the most splendid of these tombs is that opened by Belzoni. The entire extent of its succession of chambers and passages is hollowed to a length of three hundred and twenty feet into the heart of the rock, and they are profusely covered with the paintings and hieroglyphics usually found in these sepulchral chambers. But this and all the tombs depend for their magnificence more on the paintings that adorn the walls than on anything which can strictly be called architecture."*

These tombs of the kings are thus full of information in regard to the artistic skill and the domestic customs of the Egyptians. The painted bas-reliefs cut out of the natural rock, and the endless paintings on the walls, yield us many interesting details of their religious and funeral ceremonies, and of the various features of their civil, military, and domestic life. We find here abundantly represented their system of agriculture, and numerous illustrations of the chase, the dance, games, music, garden scenes represented with fish-ponds, birds, and fruit-trees ; also, portraits of kings and civil officers, with countless other illustrations.

The most beautiful among the many commemorative monuments of Asia Minor, in fact the most splendid specimen of ancient sepulchral architecture, was undoubtedly the celebrated Mausoleum erected by Queen Artemisia, of Halicarnassus, B.C. 353, in memory of her husband, Mausolus, king of Caria. The most celebrated architects and sculptors of the age were employed in the building and adornment of this tomb, which she had resolved should surpass anything the world had yet

* *Handbook of Archæology*, pp. 94-5.

seen. This magnificent monument is justly considered one of the seven wonders of the world. It is described by writers as late as the twelfth century, and is supposed to have been overthrown by an earthquake shortly afterward. Modern research has brought to light many fragments of the beautiful sculptures of the mausoleum, which are of the best order of Greek art. The plan of the basement has been traced, the area being one hundred and twenty-six by one hundred feet; and numerous fragments of columns, Ionic capitals, etc., have been discovered; verifying the description which Pliny has given of this monument. It originally consisted of a basement sixty-five feet high, on which stood an Ionic colonnade twenty-three and a half feet high. Above this rose a pyramid to about the same height, on whose summit stood a colossal group of Mausolus and his wife, the whole erection being about one hundred and forty feet high. Fragments of this statue of King Mausolus have been recovered, and are now pieced together in the British Museum. They are supposed to be the work of the celebrated artist, Scopas. Portions also of the Quadriga, or four-horse chariot, which crowned the monument and in which the statues stood, have been found.

The most remarkable Roman tomb remaining to our time is the mausoleum of Adrian, dating A.D. 130. It consists of a massive circular tower, two hundred and thirty-five feet diameter and one hundred and forty feet high, which stands on a basement two hundred and forty-seven feet square and seventy-five feet high. The whole was probably crowned with a dome, which must have made the full height about three hundred feet. In the centre is a sepulchral chamber, built in the form of a Greek cross, and formerly containing the cinerary urn. There are several other striking remains of the Roman sepulchral architecture yet extant, but none so imposing as this monument.

We have, in this rapid review of ancient burial customs, confined our attention to periods preceding the Christian era, or to nations not yet affected by the spirit of Christian institu-

. And, in fact, the establishment of Christianity may be
ı as one of the best, as well as the most convenient divi-
lines between the ancient and the modern world. It is
hat this event produced a radical change in political sys-
, or that we can trace any of the modern governmental in-
:ions directly to this cause. But, certainly, infusing
ninds of men with the teachings of the New Testament has
uced, or powerfully aided in producing, a radical change
uman views respecting the after life. The heavenly cos-
›ny of the ancient world was, in its prime essence, physi-
ours is deeply tinged with the metaphysical. The spirits of
· dead journeyed to a new earth, where earthly kings and
ns of larger stature reigned; ours pass to some ineffable
dom of whose formation we have no science, and whose
: is utterly beyond the sphere of human conception. So
:al a change of views could not fail to powerfully affect hu-
institutions and modes of thought, and its inception may
be considered as the starting point of the modern, the
› of the ancient world. With the birth of Christ died
Great Pan of the old world.

The influence of this change of views shows itself promi-
:ly in architecture; the graceful lines and perfect physical
ıty of the Greek temple being replaced by the awe-inspir-
grandeur of the gothic cathedral, in which the metaphysical
ght of the middle ages yet lives frozen into stone.

In burial customs the same mental change is clearly shown.
ll the ancient tombs considered we have a display of one
le of feelings respecting the future. The dead left this earth
nter a new earth, in body as in spirit, and with the body
ts earthly desires and habits. It needed food to sustain
hrinking strength, and drink to supply its failing veins un-
ıe heavenly nectar and ambrosia should be placed before
. the banquets of the new world. The warrior would need
ıorse and arms in the combat and the chase on the plains
:eaven; his favorite household utensils and personal orna-
:ts to gratify his spirit beyond the grave as they had on

earth, and his favorite wife to cheer his returning steps from the glorious labors of the spirit land. Gold also was needed to pay his way on the long and difficult passage from earth to heaven, and it was one of the most common of customs to supply the dead with a coin for this purpose. The affectionate relatives took every care to supply these needs of their dead, and plentifully garnished the tomb with all that could be required by the spirit on its awakening to the wants of a new existence, which to their minds were simply a glorified counterpart of the earth life.

To us, Christians, however, to whom the burial of the body is simply the consigning of "earth to earth," the living spirit of the departed never entering the grave; to us, who fondly trust our dead to the protecting care of their Maker, who view the body as the gross casket in which God has placed a precious jewel, and only worthy while the light of the gem shines through its dim transparency—the idea of providing for the future needs of the spirit is so utterly alien that any modern instance of it would be considered as ridiculous.

The archæologist of the future, hinted at in our opening pages, would perceive a distinct line of demarcation between the tombs of this period and those of the ancient period we have been considering; as well in this marked difference in the character of their contents as in the wide-spread practise of cremation formerly, whereas inhumation alone is now almost universally practised. In the character of the tombs as striking a change would be observable; though modern times have produced some sepulchral monuments which will vie with the most celebrated of the past. Of these, however, the most remarkable is the Taj Mahal, that striking Indian temple to the dead queen of the Mogul emperor, Jehan, which, for beauty, grace, and refined proportion, is the wonder of modern architecture.

ART. VI.—1. *Gedichte.* Von FERDINAND FREILIGRATH. Sechste Auflage. (Poems by FERDINAND FREILIGRATH. Sixth edition.) Stuttgart und Tübingen. 1843.

2. *Ein Glaubensbehenntniss Zeitgedichte.* Von FERDINAND FREILIGRATH. (A Confession of Faith. Poems for the Times. By FERDINAND FREILIGRATH.) Mayence. 1844.

THE age of Luther, in Germany, was distinguished by reat intellectual activity, though in literature it furnished lit-e of importance besides works of polemical theology. The evival of learning had produced its legitimate results in im-roving literary taste and giving an impetus to mental effort. he effect in this, however, was not so early apparent in the orks of German authors as might have been anticipated. eligious and political controversy absorbed most of the vig-rous intellect of the period, and the era which followed was arked by almost entire literary stagnation. Recovering rom this, the Germans at last produced a national literature. he age, led in by Herder and Lessing, and whose most rilliant ornaments were Göthe and Schiller, was the glory of ermany, and, from present appearances, it is likely long to emain a unique era. The literature of the country has not een steadily progressive. The period of the *Niebelungenlied* nd the *Heldenbuch* was followed by a vacation of productive-ess; so was the age of Luther, and so has been the era of Göthe and Schiller.

In the literatures of all nations there has been ebb and flow; that of Germany has had but one full tide. Still that epoch, from about 1770 to 1850, was a great one, and the Germans have much reason for the pride they feel in their writers. After Göthe and Schiller, Kant and Fichte and Schlegel, there was not a deluge, but rather an ebb tide in letters. The German muse would seem to have exhausted herself with one extraordinary effort. Some echoes of that remarkable period we have heard in the songs of Heine and

Freiligrath. In the Teutonic miscellaneous writings of the present day we find nothing that seems to promise a renaissance. Still we cannot tell what may be in store for us; and when they have done with building up their empire—if that time ever comes—perhaps we shall see further evidences of their literary power. At least we sincerely hope this may be the case. It is a good sign that the nation preserves its enthusiasm for its writers, and even idolizes those who are inferior for the want of more excellent objects of admiration. It is to be hoped that the assured handsome rewards of popular appreciation and applause will stimulate creditable production.

The eagerness of the Germans to continue the succession of their poetic idols is well exemplified in the case of Freiligrath. He, to some extent, supplanted Heine in the popular regard, which was not, of course, very agreeable to the latter, who indulged a fling at his rival, which was, perhaps, more just than magnanimous. While we believe it would be unjust to Heine to attempt a parallel between the two, we are glad to acknowledge that Freiligrath has merits; at least he is probably the most creditable living representative of modern German poetry, and as such his works are worthy of examination. He comes to us merely in course in our discussions of Teutonic authors, as we have already treated nearly all of the more prominent writers of that country.*

Ferdinand Freiligrath was born June 17, 1810, at Detmold, in Westphalia. His father was a teacher in the burgher school. Our poet is said to have been very precocious, to have written verses at the age of seven. We are not believers in juvenile prodigies. It is not that we put much stress upon the popular belief that bright children always die young, nor upon the old adage "soon ripe, soon rotten;" but generally the greatest minds, like the largest trees, develop slowly.

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* For articles on Wieland, Goethe, Schiller, Klopstock, Heine, and Uhland, *vide*, respectively, Nos. VIII., X., XII., XVI., XXV., and XLI., *Nat. Quar. Review.*

the case of really excellent writers few, we believe, have
›wn remarkable precocity, notwithstanding the wondrous stor-
that are told by biographers, or their own claim to have
ısped in numbers." At any rate, it does not prove one a gen-
that his ambition and his efforts were excited at a very early
ɜ. We should rather see a copy of creditable verses written
a man of fifty than trash produced by a boy of ten, however
narkable it might be for that age. Leaving out all romance,
should consider the industrious youth, who advances slowly
l surely, more promising than the precocious genius who
onishes his parents and teachers by the display of unex-
ɔted powers. Pope and Cowley developed early; Milton
ıld not be called precocious, and we remember the report of
ebuhr, who, on his visit to Edinburgh, became acquainted with
ɜ Scott family, concerning "the eldest son, dull in appear-
ce and intellect," which dull boy we all know as Sir Walter
ott. But it matters not at what period of life, whether
rly or late, a person manifests extraordinary powers, if he
ally gives us something admirable. We will remark, in
ssing, that as bright children usually wear out early, so
fame acquired quickly and easily is seldom durable.
nd this observation is applicable to the subject of our
ticle.

Through the interest of a rich uncle the young Freiligrath
as destined for a mercantile life. Consequently, he left the
ymnasium at the age of fifteen and joined his relative at
›erst, where he remained six years, and served his appren-
ɔeship to commerce. His uncle, however, freely indulged
ıe private intellectual tastes of his *protégé*, and Ferdinand
arned at this time the English, French, and Italian lang-
ages, of the two former of which he has shown his mastery
y many excellent translations. In 1831 he removed to
msterdam, where he was employed as clerk in a large com-
ıercial house until 1836. It was while here that he wrote
ıost of the poems contained in his first and most popular
olume. He began publishing in periodicals in 1830, and his

first volume was issued in 1838. It bore the title of "Gedichte," and consisted of lyrics, ballads, romances, occasional pieces, and translations from the English and French.

During his residence at Amsterdam Freiligrath mingled much with travellers and seafaring men, and especially with German emigrants to the new world. In this he showed his appreciation of what poetry might become when conformed to the needs of the times. He would be an artist, like those of the Dutch and Flemish schools, whose works he had an opportunity of studying; he would be a realist—a Pre-Raphaelite. His poetic pictures are strikingly realistic. Their very titles, as Howitt has remarked, would suggest a catalogue of paintings. We instance a few, as "The Emigrants," "The Skating Negro," "The Burial of the Bandit," "The Bivouac," "The Picture Bible," "The Steppes," "The Lion's Ride," "The Traveller's Vision," "Under the Palms."

Freiligrath in this volume was realistic, but his realism was of a picturesque sort. He painted such pictures as he saw before his eyes, not with any considerable insight into their hidden meanings, but with a fair appreciation of their evident beauties. He always represented their striking points. A modern German critic* has remarked that "The absence of everything like an energetic practical life in Germany during our times has no doubt occasioned the speculative tendency of our writers." Freiligrath was so situated as to see a great deal of practical life, and so disposed as to make a good use of it for poetical purposes. He kept his eyes and ears open, and his poetic mind was busied in endeavoring to extract the sweets from each circumstance that was offered to his observation. The result was that he saw much that others might have found unattractive, but that to him was full of poetic suggestion, and he did his best to exhibit the attractive phases of what came before him. He

* P. A. Pfizer.

ıcceeded to a very considerable extent, and produced a ›lume of which the Germans are justly proud.

He had a mind for the externally picturesque, being by › means addicted to mysticism. What he wrote as the sult of his own observations is very different from, and ›nerally, in a true poetic sense, superior to his mere imagin-gs. Of his pieces of this character a very favorable speci-en is "German Emigrants," a graphic picture representing .e preparations for embarkation; and, among the rest, aidens of the Black Forest with their pitchers:

"These vessels carried oft to fill
At the familiar village spring,
When by Missouri all is still,
Visions of home will round them cling."

There are many such poems in this volume, all displaying ıtentive observation and genuine sympathy, with fair versi-ing talent. His poems are, as his countrymen would say, ›jective; he does not understand the human heart so as to khibit its motions; he has no lofty philosophy, and no sub-le perceptions. As a specimen of his versification we will ive some stanzas from "The Amphitrite," such a picture as ıust often have been presented to his view, and which he epresents faithfully:

Siehst du vor Ankor dort
Die Amphitrite liegen,
Festlich erglänzt der Bord,
Die rothen Wimpel fliegen.

Es hangen aufgehisst,
Die Segel an den Stangen;
Der graue Neergott küsst,
Schäument der gattinn Wangen.
* * * * *
Der Schiffer steht am Nast
Die Lenden roth umgürtet;
Er weiss nicht welchen Gast
Sein räumig Schiff bewerthet."

"Yonder at anchor see
The Amphitrite lying,
With gaily painted sides,
And crimson streamers flying.

"Her snowy wings are furled;
The seagod on his breast
Lulls her with kisses soft,
And whispers her to rest.
* * * * *
"In girdle red against
The mast the skipper leaneth;
And what a guest doth grace
His craft he little weeneth."

Reminiscences of childhood he treats tenderly and lovingly, as in "The Picture Bible." Such tender recollections naturally endeared Freiligrath to the heart of a people so fond of home and its associations as the Germans.

"Thou, folio, dusk and olden,
My friend in early days,
When loving hands oft opened
Thy secrets to my gaze.
Oft o'er thy pictures bending,
Delighted I would stand,
My sports forgot, while dreaming
About the Orient land."

Not less striking, as expressing the regret which all feel that the delights and unquestioning faith of early years are passed in the closing stanza:

"Ah! time, now fled forever!
Thou seems't a tale gone by,
The Picture Bible's treasures,
The bright believing eye,
The glad, delighted parents,
The calm, contented mien,
The joy and mirth of boyhood,
All, all, alas! *have been.*"

Freiligrath has many pretty conceits, some of which are even too fanciful, as in "The Revenge of the Flowers." A beautiful maiden is lying asleep, with a vase of flowers by her side. From each blossom a spirit advances, all exquisitely described, and every one characteristic of the flower whose spirit it is supposed to be. They complain of their lot in being plucked from their stems to fade and die to give a human being pleasure, and all vow vengeance against the maiden as the cause of their woe. In the morning she is found dead:

"Like a blossom early faded,
Scarce the tint her cheek hath fled,
Sleeps she with her fragile sisters,
Killed by odors round her shed."

poet has no close or deep communings with nature; as some love for her, and occasionally represents her noods quite charmingly. He could not have written o the North Sea that would compare with Heine's, nor he more excellent "Pictures of Travel" of the latter but he can give us fanciful verses, light and , like the zephyrs he writes of in the "Wisper- This poem is a very good specimen of musical verse:

"Ja, immer, immer nur stromauf
Fährt er mit Pfeifen und Geschnauf,
Von unten jetzt und allezeit
Braust er nach oben kampfbereit;
Nie mit der Welle geht sein Strich,
Nur ihr entgegen stemmt er sich."*

imagination of Freiligrath was strongly captivated by scenery, and especially by the eastern and southern ilds, the haunts of lions, tigers, and giraffes. We have iaginative pieces from his pen sketching such scenes, which are quite vivid, not to say sensational. One of striking of these is "The Traveller's Vision" (Ges- Reisenden). "The Mirage" is wild and beautiful, Under the Palm Trees" is terrific, representing a l a leopard fighting for the body of a man, when a ake envelopes and crushes them both in its folds. He cularly fond of representing the king of beasts, of striking description is contained in "The Waker in art." The most celebrated of these pieces is, perhaps, ion's Ride:"

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* "Aye, piping, whistling, loud and shrill,
Its course is upward, upward still,
Like one that scorns an easy life,
And rushes gaily into strife,
It will not with the current go,
But ever in its teeth doth blow."

"Then bend your gaze across the waste; what see ye? The giraffe
Majestic stalks toward the lagoon the turbid lymph to quaff;
With outstretched neck and tongue adust, he kneels him down to cool
His hot thirst with a welcome draught from the foul and brackish pool.

"A rustling sound—a roar—a bound; the lion sits astride
Upon his giant courser's back. Did ever king so ride?
Had ever king a steed so rare, caparisons of state
To match the dappled skin whereon the rider sits elate?"

His pictures of oriental and desert scenery are altogether imaginative, containing much poetic beauty; they are not at all realistic, though not, perhaps, so popularly attractive—at least not so sensational—his descriptions of what has come under his own eyes are of more real value. It is not many who can fully enter into the spirit of that of which they know nothing except through books. Tom Moore had this kind of imagination and poetic susceptibility which he fully displayed in "Lalla Roohk," so that an oriental traveller struck with the accuracy of his pictures, and learning that the author had never been in the East, declared, "I see that reading D'Arblay is as good as riding upon the back of a camel."

Freiligrath never visited the East, and his pictures are wholly imaginary, founded upon the accounts of travellers. Some of them are fine as such, but they do not bring us into association with eastern scenes which we feel to be real; we are always conscious that they are merely the fancies of one who sees these countries through an imperfect medium. "The Moorish Prince" is one of the most graphic of his fanciful poems attempting to represent foreign and by-gone scenes. "The Sheik of Mount Sinai" is admirable, of its kind; so also are the "Sand-Songs."

"Weapon-like this ever-wounding wind
Striketh sharp upon the sandful shore;
So fierce thought assaults a troubled mind,
Ever, ever, ever more!

" Darkly unto past and coming years,
Man's deep heart is linked by mystic bonds;
Marvel not, then, if his dreams and fears
Be a myriad, like the sands!"

As a translator, Freiligrath is quite successful. His wledge of the English language, particularly, seems to be ough, and he readily catches the spirit of modern British ors. He has put into German verse Coleridge's "Ancient iner," and a number of the songs and occasional pieces of re, Scott, and Burns. He has also executed many trans- ns from the French. Our readers will like to know how *Ancient Mariner* looks in a German dress:

"Einen alten Seemann gibt's, der Hält
Von dreien Einen an,
Was will dein glühend Aug' von mir,
Graubärt'ger alter Mann?"

This we certainly do not regard as an improvement upon original. His rendering of Tom Moore's "This World is Fleeting Show" has more of the genuine ring:

" Die Welt ist all' ein flüchtig Scheinen;
Der Freude Lächeln, süss und klar,
Der stillen Wehmuth bitt'res Weinen.
O falsches Thun, O falsches Weinen—
Nichts, nur der Himmel noch ist wahr."

This first volume of Freiligrath's reached six editions in nany years. Encouraged by its success he, in 1839, with- w from commerce. He had been introduced to the world iterature by Schwab and Chamisso, who were, undoubtedly, onsiderable service to him. From 1837 to 1839 he had n employed in a commercial house at Barmen. The ex- tations, founded upon the interest of his uncle, were never lised. He was married in 1841, and passed a year at rmstadt, and another at St. Goar. In 1842, at the in- ıce of A. von Humboldt and the Chancellor von Mühler,

a small pension was bestowed upon him by the king of Prussia. This was the occasion for much carping by the radicals, but we have Freiligrath's assurance that the pension was unsought and unexpected. He says, in the preface to the "Confession of Faith," published in 1844, that he had simultaneously adopted and carried out the resolution of "resigning into the king's hands my much talked of little pension. About New Year's, 1842, I was much surprised by the intimation that it had been conferred upon me; since New Year's, 1844, I have ceased to receive it."

Freiligrath has proved that he had no disposition to surrender his independence; that he was not to be purchased, and that he was true to his convictions of right and his love of liberty. He was willing to suffer for "freedom and right," and soon his principles were put to the test. The late king of Prussia, at his coronation, was profuse in promises to his subjects of enlarged liberty and a free constitution. These declarations were hailed with grateful enthusiasm, and when the king invited to his capital the most noted scholars and writers, giving them professorships in his university, the German heart was touched to its depths. Seven professors of Göttingen, who had been expelled for refusing to sanction the destruction of the Hanoverian constitution, were invited to Berlin and well provided for. Amongst them were the brothers Grimm, the Poet Rückert, and the painter Cornelius, the founder of the Düsseldorf school. Boundless hopes were naturally excited by this liberality. Soon, however, it was found that the apostles of liberty had been enticed to the Prussian capital, that they might be muzzled. Not one was permitted to utter a free thought in lecture or publication. If a sentiment displeasing to the ruling powers was expressed in a lecture, the offending professor was warned not to repeat it or anything of the sort. In consequence, several of the professors resigned. The censorship was most rigid. The brothers Grimm were threatened for receiving their old friend, the liberal poet Hoffman. Some authors were imprisoned for

years, and Paris was full of German refugees who were men of talent and learning.

Freiligrath was too true a German to truckle to such a despotism. In 1844 he published his "Glaubensbekenntniss" (Confession of Faith), taking his stand firmly and daringly on the side of freedom. This volume contained many political poems, in which the author spoke out boldly upon the events of the day. In his preface he fairly throws down the glove to despotism, and gives his reasons for so doing.

"The turn which things have very recently taken in my more restricted fatherland, Prussia, has, in many respects, painfully undeceived me, belonging as I did to the number of those who still hoped and trusted; and this it is which has called forth most of the poems in the second section of this volume. * * * Firmly and unflinchingly I take my stand by the side of those who are resolute to breast the current of despotism. No more life for me without freedom."

Some poems sent to the Cologne Gazette had been suppressed, and on his appeal to the high court of censorship at Berlin in February, 1844, it was decided that two lines must be omitted.

"The Tartar vulture tore the rose of Poland
Before our eyes, and grimly left it lying."

These lines were pronounced a libel upon the czar of Russia, the king's brother-in-law. The poem was published with the lines omitted in Prussia, but in Hamburg it appeared entire, and soon circulated through all Germany. His song "Freedom and Right," and a translation of Burns' "A Man's a Man for a' That," had been prohibited.*

* The efforts of the high court of censorship, consisting of the chief dignitaries of the realm, to sweeten the pill of despotism, are curious. The following is the decree: "The fundamental notions from which both poems proceed are, in their clear and pure conception, perfectly true, and may even be uttered and extolled in a poetic form. But such turn and import is given them in the said poems that a provocative appeal is thereby made to the tendencies in conflict with the existing social and political order of things, the first poem, namely, addressing itself to false ideas of freedom,

Our readers may like to see a stanza of this condemned poem.

"O deem not in death's cold embrace they are sleeping,
O, think not from earth they have taken their flight;
Though eloquent voices deep silence are keeping,
And cruel oppressors denying the right.
No! though the faithful in exile are lying,
Or, tired of the thraldom neath which they are sighing,
In chains by the hands of each other are dying,
Still flourish immortal both freedom and right.
Freedom and Right." *

Before publishing his last volume, Freiligrath found it convenient to leave Prussian soil, and to take refuge in Brussels. His book was better received than it would have been, doubtless, but for the position he took, and the persecution to which he was subjected. His political poems were well suited to the times for which they were written. The popular heart had begun to be awakened, and he, sympathising with his more liberal countrymen, gave expression to the general feeling. With less literary merit than they possessed, his songs would have been popular under the circumstances. As it was, they were really what he called them, "poems for the times," and possessed considerable worth aside from their features of temporary interest.

Immediately upon the appearance of this work an order for the arrest of its author was issued, but he was beyond the reach of royal vengeance. The suppression of the poems

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the second to the naturally hostile opposition of the several ranks of society. Wherefore, these poems are manifestly at variance with the principles of the censorship, as laid down in the fourth Article of the Instructions.

"BERLIN, den 18 Februar., 1841.
"Das Königle. Ober-Censurgericht.
"BORNEMANN."

* "O glaubt nicht sie ruhe fortan bei den Todten.
O glaubt nicht sie meide fortan dies Geschlecht.
Weil mutigen Sprechern das Wort man verboten,
Und Nichtdelatoren verweigert das Recht.
Nein, ob ins Exil auch die Eidfesten schritten;
Ob, müde der Wilkür die endlos sie litten,
Sich Andre im Kerker die Adern zerschnitten—
Doch lebt noch die Freiheit und mit ihr das Recht.
Die Freiheit! das Recht."

was also decreed, but five thousand copies were at once distributed through Germany. The accession to the ranks of the liberals of a man of Freiligrath's reputation was an event to cause rejoicing. With his wife he went to Switzerland, where he abode with Herr Heinzen, who had fled from Prussia, and had also been ordered to quit France within forty-eight hours. At Zurich, Freiligrath resided for about three years. He went to Paris, and six hours after another Freiligrath was arrested for him, by a strange coincidence not only bearing the same name, but living in the same street. Our poet then went to England, where he was received with open arms by his countrymen residing there, and also with considerable enthusiasm by the English, who sympathised with them, and who had become acquainted with his writings. A laudatory article, entitled "Freiligrath in England," in the People's Journal, written by William Howitt, and setting forth the persecutions and the merits of Freiligrath, did much to secure to the poet a favorable reception with the islanders.

In London he obtained employment in a mercantile house. He was about to embark for America, when the events of 1848 induced him to return to Germany, where he took an active and prominent part with the democratic party in endeavoring to establish freedom. In 1848 he was prosecuted for his poem, "Die Todten an die Lebenden" (the dead to the living), but was, for the first time in the annals of Prussia, tried by a jury, and after two months was acquitted. In May, 1851, he was subjected to another prosecution on account of the second part of his "Political and Social Poems," and for being a member of the democratic central committee of Cologne. On this occasion he was too wise to risk a trial, knowing well that he would not be permitted a second time to get off without punishment. He escaped before the writ was served, and again sought refuge in London. Here he became connected with the Swiss bank, and enjoyed a period of tranquillity and of tolerable prosperity.

Freiligrath has continued to publish up to a recent period, but his later works have not excited nearly the same amount of attention as was bestowed upon his two earliest volumes. The most of his later writings have been of a political character. His "Ca Ira" was published at Herisau in 1846; "Die Revolution," Leipsic, 1848; "Neure Politische und Sociale Gedichte," Cologne, 1849; second part of the same, Brunswick, 1850. He has also produced, in conjunction with Hub and Schenzler, "Rheinisches Ideon," Coblentz, 1839; "Rheinisches Jahrbuck," Coblentz, 1840-41, with Lomrolk and Nazerath; with Duller, "Das Romantische Westfalen," "Gedicht zum besten des Kölner Doms," Darmstadt, 1842; "Karl Imermmann, Blatter der Erinnerung an Ihm," Stuttgart, 1842. He has also translated Victor Hugo's "Odes" and "Chants du Crepuscule" (1836), and Longfellow's "Hiawatha." The first complete edition of his works was published in New York, in six vols., 1858-9.

The political poems of our author exhibit considerable vigor and intensity. We should expect him to be fierce, if not sometimes vindictive, when inspired by the events in which he had so great a personal interest. In dealing with politics and with acts of despotism which aroused his loftiest indignation, his muse becomes sometimes terrible, and again keenly sarcastic. His poem, "When?" on the censorship, is a righteous appeal to the manhood of those engaged in that business, to give up this nefarious occupation, and refuse longer to be the tools of tyrannical spite.

"Our records tell of sturdy headsmen
Who scornfully have cast
Aside the axe and mask, exclaiming,
Enough—be this the last!
Within our souls a voice cries, murder!
We give its tones full sway,—
Henceforth your own delinquents punish,
For we no more will slay."

It is not only against those in high places that the shafts of

Freiligrath have been directed. He recognised the fact that the humiliating position of the German people was due, in great measure, to themselves; at least they had the means of correcting, by vigorous and united effort, the evils of which they complained. To rouse them from their lethargy, to induce them to act energetically and effectively, was his desire. He did much, doubtless, to awaken them to a sense of their position and their responsibilities, and the reforms of later days may be, to some extent, attributed to him. A capital and effective piece of satire, and a stirring, perhaps too bloodthirsty, an appeal at the same time is "Hamlet."

"Deutschland is Hamlet. Nightly round
His walls doth buried Freedom stalk;
With mute appeal, in woe profound,
Crossing the warders in their walk.
There stands the ghost in steel arrayed,
And to the doubting falterer saith,
Be my avenger; draw thy blade!
My sleeping ear was drugged to death."

* * * * *

"So, lacking resolution, he
Pretends he's crazed, trusts all to time,
Soliloquizes plenteously,
And breathes his choler out in rhyme;
In pantomime he vents it too;
And once, in a belligerent fit,
He sticks Polonius Kolzebue,
And lets the right man go unhit."

This is not only a severe but, perhaps, just representation of the German people at the time,* but an admirable characterisation of Hamlet, the irresolute, sentimentalising prince.

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* Not less sarcastic is Menzel, one of the ablest of German critics. "The Germans do little, but they write so much the more. When the student of a future age shall look back upon the present era of German history, he will see more books than men; he will be able to walk through years as through the chambers of a record office. He will say that we have been sleeping, and that our dreams have been books, etc."—*Deutsche Literatur*, vol. i.

Freiligrath as a poet has done much; yet he has not produced a great deal that is likely to live. Poetry adapted to the present is not poetry for the future. Still, the present is not to be ignored; it has its demands, its requirements, and they are to be met. The question we would ask here is, Can our actions in reference to our external life be best inspired by poetry adapted to present events? We doubt much if they can. Song is adapted to reach our inner natures, but it is not often that which is brought into action by political events, or by affairs which affect our outer, every-day life. It is almost as reasonable to expect our capacities for business to be enlarged and quickened by verse as our political energies. The effect of the highest poetry—we are tempted to say of any true poetry—is to develop us from within. To deal directly with the external, to attempt to arouse us to action as citizens, is not the province of song.

"Give me the making of a people's songs," says Mazarin, "and I care not who makes their laws." The force of the sentiment depends upon the kind of people he would have. If he wanted to incite a nation to conquest we are sure that song-writing would not be the best means to effect it, at least as respects *immediate* results. It is true there have been songs which seemed to stir the heart of a people to the most vigorous action. Such was the Marseillaise. But this poem did not rouse the French nation; it was already fully roused; the verse of Delille was but the expression of popular feeling—inspired by and reflecting it. We believe it would be impossible through verse alone to incite a people to action for which they were not already prepared. In bringing them to this condition at any given epoch, poetry may have been a powerful instrumentality; but it would be the poetry of the past, having no direct reference to current events, but whose sentiments had sunk into the soul of the populace, and, perhaps, been transmitted from generation to generation. In any great events of modern times among English-speaking peoples, the influence of Shakspeare would exceed that of

hundreds of the most popular song-writers—or, indeed, any poets—of the day.

The genius of poetry does not usually love the haunts of men. She may interest herself in their affairs, but it is from a distance. She may sing of camps and carnage, of sieges of Troy, or of French revolutions, but not while she is mingling in these exciting scenes, if she ever does so. She loves the fields, the forests, the fireside, and peace. She nestles in the most secret recesses of the human heart; and if she inspires to action, it is when her influence has permeated the entire being—usually after it has been silently working for a long time. Hers is a "still small voice," and not the trumpet's bare. When she mounts the rostrum or the war-steed she unsexes herself, and no longer compels our adoration.

Whether, if he had not turned politician, Freiligrath would ever have become a great poet is problematical. He sometimes displays power that, if diligently cultivated, might in time have secured him a high rank among modern poets.* He left school too early, we should say, in the first place, to develop that thoroughness and depth which would have made him a master of language and a complete literary artist. Many born poets have attained superior excellence without the advantages of good education. But these had a kind of education not less, and for the poet, we believe, generally more important. Their teachers were adversity and nature, acted upon by and impressing deep failure. Expression they also studied, but few self-educated poets have excelled in it.

It will hardly do at this day to dispute Horace's maxim that poets are born, not made, but we shall at least venture to oppose to it an alteration of an old adage, and declare that,

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* Menzel had hopes of him *apropos* of his earlier writings. "Freiligrath, who writes in a style which fluctuates between that of Byron and the noble Pole, Mickiewicz, has lately published a few poems of such high beauty as to lead us to expect great things from this deep-feeling mind, this spirit which can sway the realm of imagination and of language."—*German Literature*, vol. iv.

Poeta non facit saltum. The poet is born with an adaptability to his work; with a susceptibility more or less extreme to all exquisite influences. But culture is essential to his success, and this can be obtained only by persevering labor. It is as reasonable to expect the painter or the musician to excel in execution without previous thorough training as for the poet. It is true that the writer requires little mechanical facility, compared with the pianist or colorist, but for the reason that his materials are mere intellectual, it is the more difficult to obtain command of them.

Freiligrath has studied expression to some purpose, but he has not developed a great deal of poetic feeling—at least no considerable depth.* Life has not with him been a struggle against adverse conditions within and without, which he has overcome by virtue of inherent greatness, where others have gone down, thus exemplifying in the case of a human being and an artist a phase of the principle of "natural selection." His is not one of the unconquerable souls that labor and dare, against all odds, for an ideal, the attainment of which is by no means certain, and at best success may be achieved only when it is too late for the aspirant to reap any earthly benefit from it. At every step the worker finds obstacles, and on all hands the pilgrim is beset by temptations. He must resolutely struggle to remove the one, and determinedly close his ears to the songs of the others. He must be resigned to endure poverty, neglect, and even hatred, alienation of friends, and perhaps the sundering of the dearest ties.

In the case of Freiligrath we see no evidence of great struggles and admirable conquests. He consented to become a votary of commerce when his pecuniary circumstances required bettering. This proves to us that he was not a genuine artist. Commerce, or any occupation whose end is mere worldly gain,

* A good German authority gives a less favorable opinion than we are inclined to adopt. "Carried away by the gorgeous outward splendor of his poems, we never remarked that he was poor in ideas and thoughts, and that the descriptions which he gives are all borrowed from various quarters."—*Conversations Lexikon der Gegenwart.*

s incompatible with the pursuit of art. Those who would excel should learn of Bernard Palissy. We do not say that t would have been wise, in a wordly sense, for Freiligrath to give up everything to his art, but only thus could he have become a first-rate poet. One cannot serve both art and nammon. He wished temporary ease, and he was permitted to secure it, but at a sacrifice in what, were he endowed with the highest aspirations, he would have regarded as the more important—certainly the more enduring.

In entering the field of politics he was true to his principles as a citizen, but he was not faithful to his artistic aspirations. His political pieces could have but at best a temporary popularity; they could never be esteemed as immortal expressions of the higher impulses of the human soul. They had their effect, however, and for the genuine love of liberty and right which inspired them, the poet deserved what he has received—a due share of evanescent applause. It is not surprising that his popularity has waned steadily of late years. We, indeed, hear little of him at the present time, even from Germans, who were once most enthusiastic about him. His fame was principally connected with events which have ceased to excite special interest, and the poet of the times has passed into forgetfulness with his era. We do not deny the excellences of many of the pieces in his earliest volume, but that was not much more than a creditable promise which he has failed satisfactorily to redeem.

After Heine, Freiligrath seems to be the only representative of modern German poetry worthy of special attention. Has the age of song passed in Germany? There is certainly no dearth of poetical writers, but none of them exhibit any remarkable brilliancy. They are rather imitators than original artists. In any of the shops of our importers of foreign books will be found recent poetical publications, but few of them are even ambitious. It is not that the intellectual activity of the Teutons has abated. They still put forth creditable efforts in the way of criticism, history, and

philosophy. In criticism their recent literature is especially rich.

Is it true that the age of song has passed for all peoples? Poetry, we fear, is generally on the wane, yet we hope for a new impetus in that direction. The French have produced two or three fair poets in recent times; in England we hear the names of the Brownings and Tennyson, with some others, not so eminent but still deserving of credit. It is the age of newspapers and science. But poetry is needed to harmonize and beautify the whole, and we are confident that in the divine order it must be produced and be appreciated.

ART. VII.—*Our Girls.* By DIO LEWIS, A.M., M.D., President of the "Normal Institute for Physical Education," Physician-in-chief to "A Swedish Movement Cure," Author of "New Gymnastics for Men, Women, and Children," "Weak Lungs, and How to make them Strong," "Talks about People's Stomachs," etc. 12mo. pp. 388. New York. Harper & Brothers. 1871.

WE remember the time when the publishers of this book could not be induced to put their imprint on such a production; for it is not merely a vulgar catch-penny. Without departing in the least from the language of moderation, we may say that to us it seems indecent and demoralizing; and we think our readers will regard it in the same light before we close this notice, although our glance at it must necessarily be very brief.

Before we enquire whether it is the publishers or the public that have degenerated, we will first try to show what the real character of the performance is; only premising that the new Greek motto of the Messrs. Harper would seem, at first sight, very much out of place on the title page of a book like this, but is found appropriate enough on exam-

mation—as much so as a piece of spurious tinsel on a garment of linsey-wolsey. However, the Greek motto is a funny thing; and we mean to translate it by-and-by for the benefit of those who may not be familiar with the niceties of that ancient dialect.

First, we ask the reader to bestow due attention on the various titles, dignities, and "works" of the author, as transcribed from the title page, at the head of these remarks; but it ought to be sufficient to consider what "our girls" should expect from so distinguished a person as the "Physician-in-chief to a Swedish movement cure." Is it any wonder that, according to our "doctor," it is their bodies and not their minds that should occupy the chief, if not the exclusive, attention of educators? We know it may well seem incredible that even a Sangrado should dare to appear before an enlightened people with such a proposition; but, nevertheless, such is the fact in the present case.

As for French, Latin, the piano, etc., it is only, as we are told, wasting time and throwing away money to study any of them, except in very rare cases—the only profitable, good things for "our girls" are gymnastics, the Swedish movement cure, dancing, walking with a free, easy stride, etc., etc. By these means they are to be prepared for the full assertion of their "rights" so that they may aspire to become brokers, bank clerks, carpenters, gardeners, and architects, as well as preachers, lawyers, etc.*

In order to facilitate all this the Messrs. Harper kindly allow the doctor to devote five pages to advertisements of his various modes of curing and preventing diseases—modes any of which are superior to all others ever invented or discovered! Nay, so willing are the publishers to aid in so good a cause, that they give the doctor's commodities precedence of their own. Thus one side of the leaf is occupied with the conclusion of "Our Girls," while the other side is occupied

* See p. 131 *et seq.*

with an advertisement in *italics*, from which we extract the following passage:

"*Dullness and depression of spirits, pain in the stomach or abdomen, with fulness, or the opposite, acid or other eructations, nausea, loss of appetite, or excessive craving for food, constipation, or the opposite, vertigo, dull headache, and premature soreness and stiffness of the muscles.*

"*One or more of these symptoms exist in every case of dyspepsia.*

"*With this work as a guide-book, if you can't find your way out of your troubles, write to me, giving in careful detail every symptom, and I will take you by the hand and try to lead you back to health and comfort.*

"*Address*," *etc., etc.* —(p. 384.)

Here follows the full address of "the doctor," occupying three lines in the usual style of the modest and worthy fraternity to which he belongs. The next page is devoted to the wonderful virtues of the "Pangymnastikon," which are set forth in the same style, with the "moderate price" in dollars. Passing by one or two other similar pages, though duly fortified by "recommendations," we come to that devoted to the "movement cure," which concludes as follows:

"*Female weaknesses, spinal affections, rheumatism* and *neuralgic maladies, indigestion*, and *pulmonary complaints* will be treated *with success.*

"The *terms for treatment and board*, or treatment without board, may be learned by addressing Dr. Lewis, at — ——— Street, Boston.

"DIO LEWIS, M.D.,
"Physician-in-Chief."
—(p. 388.)

These pages are numbered in continuation the same as those of any other part of the book; and we admit, on reflection, that this part of the work is right enough since the object of the beginning, the middle, and the end is the same: that is, to draw water to the doctor's mill for the cure of "female weaknesses," and perhaps also for the cure of certain male weaknesses, from which we are pained to say his publishers seem to suffer just now. But without pausing to enquire whether either class of patients are likely to derive much benefit from the doses so kindly prepared for them, we proceed

to give some samples of the sort of instruction and advice offered to "our girls" for a consideration little more than nominal. First, let us hear our author on the subject of languages, on which it will be seen in due time how well competent he is to speak. Referring to the different reasons—all absurd—generally assigned by parents for wishing to have their daughters instructed in French, he proceeds: "As to French being the language of polite society everywhere; in the first place, *it isn't true*," etc.—(p. 214.)

This is followed by the important information how our author was in Paris, and how he did not hear of more than "two or three American girls who could really enjoy a social existence among the French speaking population."—(*ib.*) Every intelligent person who has visited Paris and had access to the respectable class of Americans residing or sojourning in that city knows how much truth there is in this allegation. But let us hear a little more:

> "I have no doubt that *nine-tenths* of the money and precious time given to the study of French, in our ladies' seminaries, is, in *great part, wasted.*
>
> "French is studied, in most cases, for the same reason that the piano is,—it is fashionable."—(p. 216.)

How stupid parents and guardians are! An illustration is given: "and the teacher sees a pale, round-shouldered, sickly-looking young woman, and, upon a little conversation, finds, judging from her voice, manner, and intelligence, that she *greatly needs a thorough course of physical and vocal training*," etc.—(p. 217.)

The great thing is "physical training"—the movement cure, the pangymnastikon—whatever puts money into the doctor's pocket. And whenever they practise those handsome things they should "wear a pair of loose *pants* and a jacket. Such a dress would permit many profitable exercises for the legs and hips, etc., etc."—(p. 286.) It is only "perhaps, in the case of the *dancing girls*," there is sufficient freedom now

in this respect.—(*ib.*) No wonder, then, the doctor tells us, that a woman cannot "step off the car, when it is in motion, though the horses are only walking."—(*ib.*) But all this can be remedied:

"An hour's exercise each day *with the Pangymnastikon* would soon cure her of this awkward helplessness, and, at the same time, would develop the muscles about the lower part of the body," etc.—(*ib.*)

It would be a much more desirable accomplishment for a young lady, according to our author, to have "the muscles about the lower part of her body" so well developed that she could stride into a car, *while it is in motion*, than anything she could know about French, Latin, or the piano. Must it not be admitted, then, that after all the best professors for young ladies are those who have graduated in the academy of the Hon. John Morrissey? for, we believe, it is generally acknowledged that his pupils are very skilful in developing all the more important muscles of the body, both upper and lower.

But however useless and absurd French is, Latin is still more so. The doctor has no patience with those thoughtless American educators who would "conduct their pupils away" from such fine classics as his, "*to wander amid the original mysteries of the classics of undeveloped and even pagan peoples*" (p. 223). What naughty educators! Since the Greeks and Romans were "undeveloped, and even pagans," it follows, according to the doctor, that the study of their languages and literatures "*is not only a barbarism transmitted from the dark ages*, but," etc. (p. 224.) Why, they only make ninnies of all who study them. This will account for the notorious stupidity of Copernicus, Kepler, Tycho Brahe, Newton, Leibnitz, Bacon, Milton, etc., all of whom had thoroughly mastered those "undeveloped and even pagan" dialects. It is gratifying, then, to learn from the doctor that "The colleges and universities are rapidly emerging from *this darkness of the past.*"—(p. 225.)

That a chapter which ends with such a piece of information should be followed by one on dancing, the next being on the theatre, is no more than might be expected, since dancing and going to the theatre have each more or less to do with the movement cure and that fine "development" of the female limbs, which it seems should be the chief aim of our educators.

But before we attempt to appreciate our author's highly instructive suggestions on these subjects, we may remark that if French and Latin are such useless and barbarous things, our author is wonderfully fond of dabbling in each. He would have us believe that he is perfectly familiar with both; but, alas, that ignorance is so much like murder! From a cursory examination of the book made for that purpose, we find that he has introduced French words at least a dozen times, without any other need for doing so than that of showing his learning. His French, indeed, is the cheapest kind, for it may be had without any outlay of either money or brains; all that is necessary is to glance at the end of almost any English dictionary. Yet in no instance that we have seen does our author attempt to use more than a word or two without displaying his ignorance—even one word is too much for him, when the use of it involves any knowledge of the principles of the language. Thus, for example, he is speaking of the sylph-like form of a young lady, and to this he applies the term *spirituel* (p. 69), which almost any intelligent American girl could tell him should be *spirituelle*, since *la forme*, or *la figure*, to which it applies is feminine. Again he gives us, "*Ah, que j'aime* LES *militaire*," and "*Une Poule sur* LA *mur*" (p. 208). There are but few of our readers who need be informed that neither of the two expressions is correct. In the first the article is plural, and the noun to which it is prefixed is singular; so that it is nearly equivalent to the English expression "*them* soldier;" in the second the article (*la*) is feminine, whereas the noun (*mur*) to which it is prefixed is masculine!

Such is our author's French; and as for his Latin, we do not remember to have ever seen a book or pamphlet issued by a quack doctor which did not contain exactly the same phrases that are addressed to "our girls"—such as "*Cæteris paribus*" (p. 68), "*vis medicatrix naturæ*" (p. 244), etc.

Need we inform our New York readers, that there are several young ladies' schools and academies in this city and vicinity scores of whose pupils could correct our author in his Latin as well as his French. Any of those we allude to could furnish more than "two or three American girls who could really enjoy a social existence among the French-speaking population" (p. 214). If otherwise, it would certainly not be because they are unacquainted with the French language, for the Parisians themselves would compliment many of them even for their French accent, and to our own knowledge have done so. As to the matter of health, graceful, womanly attitude, and the real poetry of motion, as illustrated by a beautiful but modest woman, where are they more fully or more pleasingly exemplified than in those afternoon walks in the Fifth avenue by the pupils of our first-class female institutions? whereas, if any of them have recourse to the movement cure, or its physician-in-chief, or to any new quack invention or discovery—not to mention practising in pants and jackets to qualify themselves to step on or off a car when in motion, it is something we have never heard of. All will admit that the ladies of our principal catholic institutions would as soon allow their pupils to wear the horns or hoofs of his satanic majesty as to wear pants, or to allow them within an acre of any movement-cure professor; and yet we believe it is generally admitted, not only that those pupils "could really enjoy a social existence among the French-speaking population," but, also, that they are as healthy and lady-like as if they had been availing themselves for years of all the wonderful contrivances of our author.*

* "I am *astonished*," he says, under the head of "What we *should drink*," "that a young woman who is *ambitious of a clear, fine skin*, should drink

And we are sure our Boston friends could bear similar testimony. We ask the Post and Transcript—both of which have excellent critics "in the family"—whether we are mistaken in this or not; or whether the performance before us has any more right to represent American views of education than the famous journey-men tailors had to announce to the world: "We, the people of England, resolve," etc., etc.

But our author's English is pretty nearly as bad as his French, or his Latin. Thus, in the very first sentence of his "introduction" to "my dear public," he says, "I write about the girls because I *want to*." That this is both ungrammatical and vulgar it is almost needless to remark. Turning over the pages pretty rapidly, we find such graceful expressions, applied to young ladies, as the following: "Poor little *silly geese*," (p. 92), "Oh that unconscionable *scalawag!*" (p. 52), "Their dressmaker's *spread*" (p. 57), "Why, *darn it*," etc. (p. 174), "Such a silly goose; you say *you don't care, you won't dress* to please men," etc. (p. 194), "You see we should not know *who's who, and what's what*" (p. 175), "You are perfect *idiots*" (p. 190), "He brought her *in town*" (p. 267). Such are a few random specimens of the vernacular of one who assumes to be a public educator and a critic in languages!

It is, perhaps, no more than we should expect that one who gives his educational instructions in the style of which we have just given samples should oppose those means of intellectual culture prescribed by the greatest minds of all nations as "waste of time," "throwing money." Nor is it more to be wondered at that with him the body and not the mind is

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tea. It is a great enemy to a fair complexion. *Wine*, coffee, and cocoa may be used without tinging the skin; but as soon as tea-drinking becomes a regular habit, the eye of the discriminating observer detects it in the skin. Tea *compromises the complexion*, probably by deranging the liver."—*Our Girls*, p. 331.

Wine is the thing to give the proper tinge; although it may compromise something else, it does not compromise the complexion, but makes it clear, fine, etc. Perhaps, if we examined a little more closely, we might find that tobacco-smoking, or tobacco-chewing, should also be adopted by such young ladies as wish to be "developed" to the full extent.

the all-absorbing part. Before giving some illustrations of this, we would direct the reader's attention to his chapters "About the treatment of diseases," "Home gymnasium," etc., taking notice that in the former we are told that it is the mother who should have the selection of the doctor (p. 239); that it is only "the blind, stupid prejudice of men who oppose," etc. (p. 240), and that "when the hard, selfish, overbearing tyranny of men shall prevent things to *take their natural course*, we shall have very few men in the medical profession."—(p. 240.)

What a noble race we shall be when we attain a state of nature! Since in our present state our men are "blind and stupid," "hard, selfish, overbearing," etc., while our young women are "silly geese," "idiots," etc., because they submit to the caprices of such men, it is evident that any change must be for the better, especially if both the geese, the idiots, and the tyrants will patronize the "movement cure," or any of the various contrivances invented or discovered by our author for the benefit of suffering humanity.

Next to the "movement cure," properly, or improperly so called—after a respectable amount of practice has been had with the doctor's "pangymnastikon," "spirometer," etc., dancing is one of the best means of culture that can be recommended to the future wives and mothers of America. Unlike learning French, Latin, the piano, etc., "the square dances," we are told, "are certainly very beautiful, chaste, and healthful" (p. 228). Everybody will acknowledge that "geese" ought not to be too prudish. Accordingly the doctor very wisely and elegantly says: "I will not comment on the wild whirligig of her skirts, *for I don't think a girl need be ashamed to show her legs.*"—(*ib.*)

Why should she? Are they not her own, and not those of the blind, stupid tyrant man? Yet the doctor affects to be very much pained because sometimes things do "take their natural course" precisely in accordance with his system; among his handsome illustrations of the fact is the following:

"Is a young man a 'catch?' Send him to Saratoga and watch a few days. The girls do not get down on their knees at his feet, and implore him to take pity on them and marry them, but they *do everything else that can be conceived of*."—(p. 107.)

If young girls do "everything that can be conceived of" in order to please a "catch" whom they happen to meet at a watering place, we think it must be admitted that their virtue is hardly of the genuine standard. But we find our space diminishing, although we have been obliged to overlook a hundred things, which, to say the least, are queer specimens of educational lore avowedly designed for the peculiar benefit of the future wives and mothers of America. We hurry on, however, to the last chapter, which bears the title of "Heroic Women," and transcribe the first paragraph:

"Without pursuing any special order, I will mention Hypasia, the *much calumniated* Aspasia, and the Athenian *courtezan* Leæna, who, when put to the torture to make her betray her friends and accomplices in a political conspiracy, bit out her tongue, and *spat it in the face of her tormentor*.—(p. 363.)

What fine models! Be it remembered that nearly all the historians, biographers, and dramatists of the golden age of Athens have been guilty of the basest and most unmanly misrepresentations if Aspasia did not keep a house of ill-fame at Megara, and then, on her removal to Athens, pursue the profession of a courtesan and of a procuress.* But we need not go beyond the honest and straight-forward Plutarch who tells us that "in the comedies she is called *New Omphale*, *Deianira*, and *Juno*." Cratinus plainly calls her a prostitute:

> "She bore this *Juno*, this *Aspasia*,
> Skilled *in the shameless trade, and every art*
> *Of wantonness*."†

The reader who wishes for any further information from

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* Vide Athæn., lib. xiii. p. 589 et seq.; also, Lucien, *De Saltatione* lib. i.

† Plut. in Pericles.

the ancients illustrative of the appropriateness of presenting Aspasia as a model woman, may turn to Suidas,* and Aristophanes;† and those who may prefer modern authorities, may turn to Bayle's Dictionary, article Pericles, note *m*; to Reed's Cyclopædia, article *Aspasia*, or to her Life by M. De Burigny, the most eminent of her modern biographers, who sums up her character by telling us that "*Elle courut à la gloire au travers de l'infamie.*"‡

As Leæna is presented as a courtesan we need say nothing of her. If she did not pass through all the gradations like "the much calumniated Aspasia," the interesting fact that she spat her tongue "in the face of her tormentor," shows that she had a becoming idea of woman's rights. She evidently belonged to the "developed" class, although it seems she was many centuries in advance of her time. The spirit which she showed on that memorable occasion was worthy of a better cause; and yet we fear that there are men at the present day who are so "blind and stupid" as heartily to wish that as many women of the same "developed" class would spit their tongues in a similar manner. Whether, if such spits were going to-day, our movement cure doctor and author would not be entitled to one of the very first, we leave it to our undeveloped readers to say.

But we must not forget our promise in regard to the publishers' new Greek motto, which presents quite an imposing aspect on the title page of "Our Girls." As we have no engraver at hand we can only copy the legend which runs thus:

ΛΑΜΠΑΔΙΑ ΕΧΟΝΤΕΣ ΛΑΛΗΔΟΙΣ ΔΙΑΔΩΣΟΥΣΙΝ.

It requires no very profound knowledge of Greek to see that, after all, this is not so much out of place on the title page of the doctor's book. But, at least, some of those who understand the legend will sympathise with us in our regret

* *Aspasia.* † *Acharn.* ‡ *Vie d'Aspasie*, p. 114.

hat such a trick should have been played on so respectable . house as that of Harper & Brothers; for whether the anufacturer of the motto did the thing by way of laughing a his sleeve, or merely failed because his knowledge of Greek as a little imperfect, it is certain that the result is far too imilar to the Latin legend, *Quid rides*, furnished by a famous rag for the new carriage of a certain successful but rather ompous tobacco-monger.

This, we think, will be readily admitted when it is borne n mind that the legend before us has two significations ntirely different, though ill-natured people may say that each as a certain appropriateness on the present crest. Be this as it may, a free translation of the motto runs thus: "Those having small lamps or bandages should combine with each other, drawing after them, or blindfolding the multitude."

We do not assert that all this is expressed in the legend, but that our version makes as near an approach to the true signification as any other that can be given in accordance with the principles of the Greek language, we can prove to any unprejudiced person who is competent to judge. Thus, using Roman letters for the sake of facility, *Lampadia*, plural of *lampadion*, diminutive of *lampas*, means *small lamps* or *bandages;* the Greeks used the term as synonymous with *ignes fatui*, and those fillets worn over the eyes in what modern school-boys call "blind-man's-buff." We render *echontes* as we do the same word in verse 18 of the first book of the Iliad—that is, *having*, or holding, although there is considerable difference between the "celestial abodes" of Homer and the small lamps or fillets of Harper; but one accusative as well as the other is governed by *echontes* according to the laws "made and provided" for that purpose. Supply *touti* and the expression is "*Those* having small lamps, rush-lights, or little blindfolders," etc. Then, if the *mutual* character of the affair be not expressed by *allelois*—though this is an obsolete if not barbarous term—we know nothing of the language of Plato.

Finally, let the curious reader compare *dialosousin* with

dialuo, to *dissolve*, to *loosen*, to enter into a *compact* with, etc.; glance at the horn, leaning like that of the milkman while watering his milk at the pump, and surmounting the anagram H&B., and we think he will admit that a very unhandsome trick has been played on our Franklin square friends. We have ourselves occasionally criticised some of their books; but, in the same numbers of our journal in which we have done so, we have most cheerfully acknowledged the merits of other publications of theirs; and it will be seen that we pursue the same impartial course in our present number. What we ask our readers to bear us testimony in is, that we have never insinuated, as the above libellous motto does, that the "Journal of Civilization," the "Bazaar," etc., are but rush-lights, *ignes fatui*, or blind-folders.

But in what category shall we place the "work" now before us? Will its publishers give us a similar performance from the "buchu" doctor? or from the equally distinguished and learned manufacturer of "the university medicines?" Is the movement cure more efficacious in Franklin square than the buchu or "university" cure? If so, need we not expect a series of very interesting illustrations in the "Journal of Civilization," or in a future edition of "Our Girls?" That there are materials enough all will admit. Thus, for example, what a handsome figure a Prof. Morrissey would make training young ladies in their pants and jackets, so that their muscles may be sufficiently developed to enable them to step on or off a car in motion, without seeming "awkward" in the effort! The stepping itself might form a nice cut, especially as the steppers are taught to have no fear about showing their legs. A group of dancers practising on the same plan, and giving an occasional kick to their French and Latin teachers sitting in the back ground, as useless lumber, would also be appropriate. This might be followed by *tableaux* of carpenters, dancing-masters, architects, brokers, etc., all females, but distinguished from the other sex only by their "waterfalls." A whole page could be devoted to the "heroic"

esan Lesena spitting her tongue at her tormentor. Of e the "much caluminated Aspasia" should not be :ten; a very handsome cut might be given of her famous lishment at Megara, and another of her similar estab- ent at Athens at the moment when, as history tells us, f her nymphs are carried away by the Magarians. This l naturally suggest the movement cure with its "physi- n-chief"; and at the present moment it would be hard, erhaps unfair, to separate the latter from his publishers, could make a very respectable figure on a double page d with their new Greek motto.

VIII.—1. *Cosmos: A Sketch of a Physical Description of the Universe.* By ALEXANDER VON HUMBOLDT.

xposition du Système du Monde. LAPLACE. Paris.

hriften der Physischen Geographie (Essays on Physical Geography). By IMMANUEL KANT. Berlin.

eological Manual. By Sir HENRI DE LA BÈCHE. London.

HE contemplation of Nature as she presents herself in the nal world cannot fail to strengthen man's intellectual fa- s, and to produce an elevating effect on his moral sen- nts. Mental contact with her phenomena raises his hts above the meaner things of earth, and he learns by exact study that what at first appeared to be little else chaos, or confusion, is regulated by order more per- han is ever exhibited in human affairs. Thus taught, ars learn to catch the "music of the spheres, low, indeed, rst, like the soft whisperings of autumnal twilight yrs, but constantly increasing in power and melody." as Humboldt says, in considering the different degrees of ment which man experiences in the contemplation of

nature, "we find that the first place must be assigned to a sensation which is wholly independent of an intimate acquaintance with the physical phenomena presented to our view, or of the peculiar character of the region surrounding us . . . . Everywhere the mind is penetrated by the same sense of the grandeur and vast expanse of nature, revealing to the soul, by a mysterious inspiration, the existence of laws that regulate the forces of the universe."

In considering the influence which isolated mountains and mountain ranges exert on the habitable condition of different parts of the earth, we are far from giving our attention to the least important phenomena which it is the province of physical geography to investigate. They are the most considerable elevations of the earth's surface, reaching a height in some cases of more than five miles, and extending longitudinally many hundreds. They are not without their uses in the economy of nature, even though they be generally sterile and unfitted for the habitation of man.

Terrestrial mountains may be divided into isolated mountains and mountain ranges, the former being quite few and the latter numerous. This arrangement is the reverse of what we find to exist on the visible hemisphere of the moon, on which mountain ranges are far from being a prominent characteristic of lunar scenery, while isolated mountains are very numerous, especially in the southern region. These facts seem to indicate a difference in the forces by which the mountains in the two cases were formed, or else the same kind of force exhibited itself in at least two different modes of action.

The great mountain ranges generally take the direction of the greatest length of the continent on which they are situated, and smaller ones follow that of the peninsulas on which they are found. This circumstance would seem to indicate that the forces which elevated both the continents and the mountains acted similarly. The highest parts of mountain chains are usually found near the middle portions.

North America contains three great mountain systems—

the Apalachian, the Rocky mountains, and the mountains of the Pacific coast. In addition to these there are the upland plains or table lands of Mexico, the Orark mountains, west of the Mississippi, the high lands of Labrador, and those of the Arctic coast. The Apalachian, or Alleghany ranges, have the smallest mean height, and are the least extensive of the three great systems of the North American continent. This system is the best known in all its parts and heights, being situated near the Atlantic coast and in the older settled portions of the United States, and it has consequently been more thoroughly explored than either of the others. The general direction which the ranges of this system take is from north-east to south-west. They extend from near the shores of the gulf of St. Lawrence to about the thirty-fourth parallel, a distance of fifteen hundred miles. This system is broken by the valley of the Hudson river and Lake Champlain. The southern portion of the system, or the Alleghany mountains proper, consists of several parallel ridges and longitudinal valleys which extend over a breadth in some places of one hundred and fifty miles. A peculiar characteristic of these ridges is their parallelism and the uniform level of their summits. This uniformity of outline is very remarkable and results from their peculiar structure. The rocks of this chain consist of the silurian, Devonian, and carboniferous groups, which are folded as if they had been subjected to a great lateral pressure when in a soft and yielding state, large portions having afterwards been removed by denudation.* The Apalachian system has an average height above the level of the sea of from twenty-five hundred to three thousand feet.

The system along the Pacific coast extends from Cape St. Lucas, on the south, to the peninsula of Alaska, on the north, a distance of twenty-five hundred miles. It includes the Sierra Nevada range of California, the Cascade, and the Coast range. The mean height of this system is between seven and eight thousand feet, and it contains besides several

* Lyell's *Travels in North America*, vol. i. p. 66.

peaks of great elevation, among which we may mention Mount Hood, Mount Fairweather, and Mount St. Elias.

The Rocky mountains constitute the most extensive mountain system of North America. They run for a distance of more than eighteen hundred miles in two parallel ranges from about the parallel of forty degrees to the mouth of the Mackenzie river in the Arctic ocean. In some parts these ranges are united by transverse ridges. The eastern range in some places rises above the snow line, though the general elevation is not very great. The western chain is not so high till we pass north of the fifty-fifth degree of latitude, when both ranges are of the same height, and frequently above the line of perpetual snow.

The Orark mountains extend from the State of Missouri through the north-east part of Arkansas into Indian territory, a distance of about three hundred miles. They reach a height of about two thousand feet. The elevated regions of Labrador and the Arctic coast have a very broken and rugged surface, with an elevation of between one thousand and two thousand feet. They contain numerous lakes, and have a climate of great severity.

The Rocky mountains may be considered as extending into South America under the name of the Andes, so that we have here a continuous chain of more than nine thousand miles in length from the Arctic circle nearly to the Antarctic. In South America these mountains rise in peaks to a height but little inferior to the greatest elevation of the Himalayas. This great chain runs along the Pacific coast and approximately parallel with it, and influences to a considerable extent the form of the two parts of the Western continent. We find along this range of mountains all the varieties of climate, from the arctic winter to the scorching heat of the torrid zone.

The mountains of South America are naturally divided into three distinct systems, separated by the valleys of the three great rivers of the continent. The system of the Andes

xtends along the Pacific coast, from Cape Horn to the isth- ıus of Darien, in a single chain. On the west they slope ıith great rapidity to the narrow maritime plains bordering hat coast. On the east they descend in high valleys and ccasional offsets to plains of vast extent, stretching for undreds of miles with a level almost equal to that of the ocean tself. Two detached systems may be considered as rising rom these plains; one in Brazil, between the Rio de la Plata nd the Amazon river, and the other is that of Parima and luiana, lying between the Amazon and the Orinoco.

The chain of the Andes first rises above the southern ocean t Cape Horn, the extreme southern point of the archipelago f Terra del Fuego. There is a "pass" for the ocean ırough the straits of Magellan which cut off the islands from ıe main land.

For about a thousand miles north from Cape Horn, the 'acific washes the very base of the Patagonian Andes; nd the whole coast is lined by a succession of islands, sep- rated from the shore by narrow arms of the sea, which ıay be considered as longitudinal valleys of the Andes filled y the sea, the islands being but the summits of the moun- ains rising above the level of the ocean. The average height f the Patagonian Andes is from two thousand to three thou- and feet, but in some places they attain an altitude of nine housand feet.

The Chilian Andes are distinguished above the others ıs containing the highest known summit on the American ontinent—the volcano of Aconcagua. Many of the peaks nter within the limits of perpetual snow, between the ortieth and thirty-first parallels. Between the pass of the Chacabuco north of Santiago, and the archipelago of Chili, ı chain of hills borders the coast, between which and the Andes there exists a longitudinal valley, well watered by the ivers descending from the central chain, which may be re- garded as the garden of the Chilian republic.

On the sides of the mountains of Terra del Fuego, reach-

ing up to a height of about one thousand two hundred fee
there are dense forests, principally of beech, birch, an
willow, rising uniformly to a height of about forty or fift
feet. In consequence of the prevalence of the south-we
wind, the trees incline toward the north-east. The snow
line descends here as low as three thousand feet above th
level of the sea. The scenery of the principal island is, i
many respects, grand and imposing, notwithstanding th
severity of the climate. "There is a degree of mysterio
grandeur," says Darwin, "in mountains behind mountain
with the deep intervening valleys, all covered by one thic
dusky mass of forest. The atmosphere, likewise, in th
climate, where gale succeeds gale, with rain, hail, and sle
seems blacker than anywhere else. In the straits of Magella
looking due southward from Port Famine, the distant chann
between the mountains appeared from their gloominess to
lead beyond the confines of this world."*

The scenery presented by the Chilian Andes is of a grander character. Few travellers would probably approach the coast of Chili without having their attention drawn in the direction of the lofty crests of these mountains, "the giant vertibræ of South America." Notwithstanding the great distance at which they are situated, some fine glimpses are obtained of the peaks of the great Cordillera in the north-east, as we enter the harbor of Valparaiso (Valley of Paradise). On ascending the hills overlooking the beach, we for the first time, however, realize the vast distance—one hundred to one hundred and fifty miles—which separate them from us. These peaks begin to be numerous in latitude 30° south, and they increase in number as the latitude increases. Their heights vary from fifteen thousand to nearly twenty-four thousand feet, Aconcagua being the highest.

The general rule in Chili is that in pleasant weather the sunset view of the Andes, off the coast, is remarkably beautiful and picturesque, more so, perhaps, than at any other

* *Journal of a Voyage Round the World.*

of day. The softness and transparency of the atmos-
; the heavens with their pure azure; the light, fleecy
s, drenched with light throughout their whole extent,
glowing with all the hues of the rainbow, sailing slowly
gh the pure depths of the sky, or hanging around the
ed mountain summits; and the darker hues of evening
g in the nooks and crevices, while yet the golden flush
ingers on the more prominent rocks and precipices, im-
to the whole a beauty which makes the scene one that is
m equalled and, perhaps, never surpassed in nature.
if the view presented by the Chilian Andes from the
be more beautiful at sunset, that which they present at
se shows us more of vastness, magnificence, and sub-
r. Just before the sun peeps above the horizon of the
and the sable curtain of night still hangs around the
of the mountains, their summits are lit up by the solar
which find their way through every cleft and fissure,
ough outlines of the peaks are more clearly distin-
ed, and the mind receives a more complete impression
e magnitude of the objects which it beholds than at any
time.*

he great Cordillera takes the name of the Bolivian
s about the tropic of Capricorn, but it is soon changed to
of the Peruvian Andes, which begin about the twenty-
d parallel. Between the chain and the Pacific there is
ige of hills parallel to the coast, and an intervening
desert seldom exceeding sixty miles in breadth, on
ı rain scarcely ever falls, and where naked rocks pierce
gh the moving sand. The width of the coast does not
much from this point to the isthmus of Darien, but the
cter of the surface changes so that a dense forest begins

* "The mountains of this glorious land
Are conscious beings to mine eye,
When at the break of day they stand
Like giants, looking through the sky,
To hail the sun's unrisen car,
That gilds their diadems of snow;
While one by one, as star by star,
Their peaks in ether glow."

about the latitude of Payta, and extends on the northward to the province of Darien.

From the twenty-fourth to near the twenty-first parallel of south latitude, the Andes are merely one grand and continous range of mountains; but on the north of that the chain divides into longitudinal ridges enclosing a series of valleys or table-lands, formed into basins by transverse mountains, knots, or by single ranges crossing like dykes. This structure prevails up to a little more than one degree of north latitude.

The eastern Cordillera in Bolivia, which begins near the city of Potosi, and extends in a northwest direction, contains several very elevated peaks, among which are Illimani and Sorata, the former rising to a height of twenty-one thousand one hundred and forty, and the latter to twenty-one thousand two hundred and eighty-six feet. All the snowy peaks of the Cordilleras near the coast are either active volcanoes or of igneous origin.

The Andes form the mountain-knot of Loxa, in south latitude 4° 50′, once celebrated for its forests, in which was first discovered the celebrated Peruvian bark. From this point the chain divides into two great longitudinal ridges, covering an extent of three hundred and fifty miles, passing through the republic of Equador to Los Pastos, in the United States of Columbia. These ridges enclose a valley of great extent, and separated into three basins by the cross ridges of Assuay and Chisinche, forming the three valleys of Cuenca, La Tapia, and Quito. The first possesses but little interest; the second is magnificent; and the third, or the valley of Quito, is one of the finest in the world. The climate is remarkably agreeable, and almost invariable. During the months of December, January, February, and March, it generally rains every afternoon from half-past one till five; but the evenings and mornings are most beautiful. The temperature is so mild that

vegetation never ceases.* "From the terrace of the government palace there is one of the most enchanting prospects that the human eye ever witnessed or nature ever exhibited. Looking to the south, and glancing along toward the north, eleven mountains covered with perpetual snow present themselves, their bases apparently resting on the verdant hills that surround the city, and their heads piercing the blue arch of heaven, while the clouds hover midway down them, or seem to crouch at their feet. Among these the most lofty are Cayambeurcu, Imbaburu, Ilinisa, Antisana, Chimborazo, and the beautifully-magnificent Cotopaxi, crowned with its volcano."†

Cotopaxi is the loftiest of the Andean volcanoes that have produced eruptions at recent periods. It is situated to the south-east of Quito, at the distance of forty-one miles, in the midst of the Andes. Its height above the sea-level is eighteen thousand eight hundred and seventy-eight feet. If Vesuvius were placed on the peak of Teneriffe, it would not reach this vast height by more than twenty-six hundred feet! Its form is the most beautiful and symmetrical of all the colossal summits of this mighty chain. It is a perfect cone, covered with snow, and it shines with dazzling splendor at sunset. Except near the edge of the crater, no rocks project through the icy covering of the peak. "The scoriæ and rocks ejected by it, and scattered over the neighboring valleys, would form a vast mountain of themselves. In 1738 its flames rose two thousand nine hundred and fifty-three feet above the crater; and in 1744 its roarings were heard as far as Honda, on the Magdalena, a distance of six hundred and ninety miles."‡ In 1803 an explosion took place, which was preceded by the sudden melting of the snow which covered its sides; and Humboldt and Bonpland, at the port of Guayaquil, one hundred and seventy-nine miles distant, heard the noises,

* Humboldt's *Travels in the Equinoctial Regions*, p. 286.

† Stevenson's *Residence in South America*, vol. ii. p. 324.

‡ Humboldt's *Travels*, p. 287.

night and day, which proceeded from it, like discharges of a battery.

It was in this region that Bougner, La Condamine, Juan, Ulloa, and Godin measured an arc of the meridian from 1735 to 1744, which afforded at the time some of the most accurate data for the determination of the form and dimensions of the earth.* The summits which were visible served the academicians as signals while they were employed in measuring the equinoctial degree. In consequence of the great elevation of the base of the peaks, the peaks themselves do not seem so high as they really are.

The continental part of Europe embraces two important mountain systems, one in the north and the other in the south, the latter being by far the most extensive. The Ural and the Caucasus mountains lie on the boundary between Europe and Asia, but they are generally classed with those of the former country, though properly belonging to both. The mountain system of southern Europe embraces the Balkan, the Alps, the Carpathian, the Appenines, and the mountains of the Iberian peninsula. The system of northern Europe embraces the Scandinavian mountains, or those extending through Norway and Sweden.

The Balkan mountains are situated south of the river Danube, and extend from the shores of the Black sea, in a westerly direction, through the central part of Turkey in Europe. These mountains do not in general attain a very great height, on the average being only about two thousand or three thousand feet. In some instances, however, they attain the altitude of eight thousand or ten thousand feet above the level of the sea.

The Alps extend from about the meridian of fifteen degrees of east longitude, through a semi-circular sweep to the head of the gulf of Genoa, a distance of about seven hundred miles. They have a breadth varying from one hundred to one hundred and fifty miles. They are highest in the western part, the

* Navrien's *Origin and Progress of Astronomy*, p. 479.

e elevated parts beginning about Cape della Melli on the
f of Genoa, and bend round by the west and north to
t Blanc; and thence east-north-east, and terminate at the
at Glockner, the whole course being about four hundred
twenty miles. All this part of the Alpine chain is lofty,
h of it lying above the line of perpetual snow. The
est mountains in Europe are comprised in a space of
it sixty miles in length, in which is Mont Blanc, the high-
of all, fifteen thousand seven hundred and fifty-nine feet
re the level of the sea. The scenery of the central ridge
ie higher Alps is grand and even sublime. This ridge is
ed with peaks, pyramids, and needles of bare and almost
endicular rocks, which rise from fields of everlasting
r and rivers of ice to an altitude of fourteen thousand

"Many parallel chains and groups, alike rugged and
ry, press on the principal crest, and send their flanks far
the lower grounds. Innumerable secondary branches,
ly lower than the main crest, diverge from it in various
ctions: of these the chain of the Bernese Alps is the
est and most extensive. It separates at the St. Gothard,
line parallel with the principal chain, the Valais from the
on of Berne, and, with its ramifications, forms one of the
remarkable groups of mountain scenery in Europe." Its
st endless maze of sharp ridges and bare peaks, mixed
gigantic masses of pure snow, which gradually fade into
blue of the horizon, presents one of those scenes where
re's repose partakes of the character of sublimity, except
is occasionally broken by the roar of the thunder or the
of the avalanche.

"Who first beholds the Alps—that mighty chain
Of mountains, stretching from east to west,
So massive, yet so shadowy, so ethereal,
As to belong rather to heaven than to earth—
But instantly receives into his soul
A sense, a feeling that he loses not,
A something that informs him 'tis a moment
Whence he may date henceforward and forever.

To me they seem'd the barriers of a World,
Saying, thus far, no farther.*

The Appenines enclose the gulf of Genoa, and run through the centre of Italy in parallel ranges to the middle of Calabria, where they separate into two branches. Their whole length is about eight hundred miles. None of the peaks reach the line of perpetual snow, though on some it remains eight or nine months of the year.

The chain of Mount Pindus stretches in a southerly direction from the principal chain of the Balkan, about the twenty-first meridian east, and extends through the whole Grecian peninsula. Indeed, Greece is a country of mountains; and although none of their most elevated peaks quite attain to the perpetual snow limit, yet some have an altitude between eight thousand and nine thousand feet, and their summits are whitened by the snowy crystals fully two-thirds of the year. But if the mountains of the peninsula, which includes Greece and the southern part of Turkey, have not that altitude which renders them celebrated as elevated portions of the earth's surface, yet, in point of historical and poetic interest, they stand pre-eminent.

The mountains of the Spanish peninsula are quite numerous—the Pyrenees and the Cantabrian in the north; the Castilian, the Sierra Morena, and the mountains of Toledo in the central portions, and the Sierra Nevada in the south. The Pyrenees are about three hundred miles in length, and serve as a natural boundary between France and Spain. The highest summit, Nethon, has an elevation of about eleven thousand five hundred feet. The mountains of central Spain are not remarkable for great height, but few peaks rising above five thousand feet. The most elevated range of the peninsula is the Sierra Nevada, the general height of which is from six thousand to nine thousand feet, the loftiest summit, Mulhacen, attaining the altitude of eleven thousand six hundred and eleven feet.

* Rogers.

The Mediterranean sea forms the southern boundary of the elevated region of eastern Europe, whose last offsets rise in rocky islands along the coast. The mountains of Sardinia and Corsica are but outlying members of the maritime Alps, while shorter offsets end in the plains of Lombardy, where they form the magnificent scenery of the Italian lakes.

The Ural mountains form the eastern boundary of Europe, naturally dividing it from Asia. This range extends from about the fifty-first parallel to the vicinity of the Arctic ocean, a distance of about twelve hundred miles. The mean height of these mountains is only about two thousand feet. The Caucasian mountains are a lofty range, extending from the Caspian to the Black sea, a distance of seven hundred miles. This range is considered as an outlying member of the Asiatic highlands. Some parts are very high; Mount Elburz, on the western border of Georgia, is seventeen thousand seven hundred and ninety-six feet, nearly eight thousand feet above the line of perpetual snow, which is eleven thousand feet above the level of the sea in that range.

Asia, the largest grand division of the globe, is remarkable for containing the most extensive mountain system in the world. The ranges extend mostly in an eastern and western direction, from the shores of the Mediterranean to the eastern extremity of the continent. The principal ranges are the Stanovoy, the Alti, the Thian-shan, the Krun Lun, the Himalaya, the Hindoo-Koosh, the mountains of Armenia, and the chain of Mount Taurus. Of these, the Himalaya mountains are by far the most important both on account of their situation in the Asiatic continent and their immense height above the level of the sea. The loftiest known peaks on the globe belong to this range.

The Himalaya range has an extent of fifteen hundred miles in length, and from two hundred to two hundred and fifty in breadth. The mean height of the range, according to Captain Gerard, is from sixteen thousand to twenty thousand feet; according to Humboldt it is under fifteen thousand seven hun-

dred feet; and according to General Sabine it is only eleven thousand five hundred and ten feet.* It is a rather remarkable fact that the line of perpetual snow on the southern side of the Himalayas is much lower than on the northern side, the former being twelve thousand nine hundred feet above the sea, and the latter sixteen thousand six hundred feet. The snow line in the Andes of Quito is at the height of fifteen thousand eight hundred feet.† The peaks in this range which exceed the mean height, according to General Sabine's estimate, are almost innumerable, especially near the sources of the Sutlege and the Ganges; and from the latter river to the Kalec there exists an almost endless succession of the loftiest mountains on earth. Forty of them surpass the height of Chimborazo (twenty-one thousand four hundred feet), once thought to be the highest peak of the Andes; and several of them have an altitude exceeding twenty-five thousand feet, Towards the valleys of Nepaul and Sikim the Himalayas are more lofty still, some of the peaks attaining an altitude greater than twenty-eight thousand feet, and one, Mount Everest, the highest known mountain, reaching the extreme terrestrial height of twenty-nine thousand and two feet, or very nearly five and a half miles. In this region the descent to the plains is excessively rapid, especially in the territory of Bhotan, where the dip from the table-land is more than ten thousand feet in ten miles. The valleys here are crevices so deep and narrow, "and the mountains that hang over them in menacing cliffs are so lofty, that these abysses are shrouded in perpetual gloom, except where the rays of a vertical sun penetrate their depth." Owing to the steepness of the descent, the rivers shoot down with great rapidity, filling the caverns with foam and the air with mist.

In most mountain chains there are gaps, or natural roads, technically called passes. These have been found of great service in crossing mountain ranges. Several of them exist

* Somerville's *Physical Geography*, p. 62.

† Humboldt's *Cosmos*, vol. i. p. 9.

n the Rocky mountains. That known as the South pass, ıear the forty-first parallel, is at an altitude of rather more han seven thousand feet above the level of the sea, and it is o easy of access that a wagon drawn by horses can travel hrough it. Thousands of emigrants on their way to the 'alleys of the Pacific have passed through it.

Some of the passes over the Andes are very high. There ıre numerous passes in the Chilian Andes, one of which, that ıf Portillo, leading from Santiago to Mendoza, is over fourteen housand feet above the level of the ocean. Those in Peru ıre higher, though but few reach the snow-line. The highest, he pass of Rumihuasi, is more than sixteen thousand feet in ıeight. That leading from Sorata to the auriferous valley of Tipuani is so high that vegitation ceases from the intense ;old at so great an altitude.

The passes of the European mountains are quite numerous ınd some of them of great height. Of the Alpine passes the nost frequented is that of Mount Cenis, between Savoy and Piedmont. Its height above the sea is six thousand seven ıundred and seventy feet. It is much more steep and difficult ın the Italian side than on that of Savoy. It consists of a ılain six miles long by four broad, surrounded on all sides by he various eminences and ridges which form the summit of his part of the chain. The heights surrounding it are from wo thousand five hundred to four thousand five hundred feet ıbove the plain.

The Stelvio, nine thousand one hundred and seventy-seven eet above the sea, is the highest carriage-pass in these moun- ains. That of St. Gothard goes directly over the crest of he Alps. Passes very rarely go over the summit of a moun- ain; they usually cross the water-shed, ascending by the 'alley of a stream and descending by a similar path on the ıther side.

The pass of the Great St. Bernard is eight thousand one ıundred and seventy feet in height, and is celebrated for the ıassage of the French over it in the year 1800. It is more

especially famous, however, for its hospice and sagacious dogs, employed for the rescue of travellers either benighted or endangered by heavy snow-storms.

> "Night was again descending when my mule,
> That all day long had climbed among the clouds,
> Higher and higher still, as by a stair
> Let down from heaven itself, transporting me,
> Stopped, to the joy of both, at that low door
> So near the summit of the Great St. Bernard;
> That door which ever on its hinges moved
> To those that knocked; and nightly sends abroad
> Ministering spirits. Lying on the watch
> Two dogs of grave demeanor welcomed me,
> All meekness, gentleness, though large of limb.
> . . . . . Long could I have stood,
> With a religious awe, contemplating
> That house, the highest in the ancient world,
> And placed there for the noblest purpose."*

The pass of Mont Cervin, east of the Great St. Bernard, is the highest in Europe, being eleven thousand one hundred feet, but it is not practicable for carriages. The great road of the Simplon, constructed by Napoleon, has an elevation of six thousand five hundred and eighty-five feet.

The passes in the mountains of Europe to which we have referred, though high, considered by themselves, seem low when compared with the passes over the great Himalaya chain. Most of the passes in these mountains are but little lower than the top of Mont Blanc, and many of them are much higher. The Marsi Niglak pass, in Thibet, is nineteen thousand feet above the level of the sea, according to Strachey. The Kavo-korum, Parangla, and Kronbrung passes are each more than eighteen thousand feet in height. All these passes are terrific, and all that attempt to cross over them suffer much from fatigue and the rarity of the air at such heights where the density is no more than half of that at the level of the ocean. Brute animals seem to be as much distressed as human beings, and many of them are unable to endure it, but die on the way.

* Rogers.

Birds perish by the thousands, many times from the violence of the wind, and the drifting snow is not unfrequently fatal to travellers. Violent thunder-storms sometimes add to the horror of the journey. While Mr. Moocroft and his guide were crossing the Niti pass to the sacred lake of Manasarowar, they were obliged to walk bare-footed to avoid slipping, and sometimes to creep along the most frightful chasms, holding by twigs and tufts of grass. In some places they crossed over deep crevices on a branch of a tree, or on loose stones thrown across. "The loftiest peaks being bare of snow gives great variety of color and beauty to the scenery, which in these passes is at all times magnificent. During the day the stupendous size of the mountains, their interminable extent, the variety and sharpness of their forms, and, above all, the tender clearness of their distant outlines melting into the pale blue sky, contrasted with the azure above, is described as a scene of wild and wonderful beauty. At midnight, when myriads of stars sparkle in the black sky, and the pure blue of the mountains looks deeper still below the pale white gleam of the earth and snow-light, the effect is of unparalleled solemnity; and no language can describe the splendor of the sunbeams at daybreak, streaming between the high peaks and throwing their gigantic shadows on the mountains below. There, far above the habitation of man, no living being exists, no sound is heard; the very echo of the traveller's footsteps startles him in the awful solitude and silence that reign in these august dwellings of everlasting snow." *

Still nature has, through her laws, mitigated the severity of the cold in these elevated regions to an extent that is unexampled in any other mountainous region, not excepting even the Andes, under the equator. The climate is so mild that the valleys are verdant and habitable. Grain and fruit ripen at elevations so great that in any other region the surface would be covered with perpetual snow. A peculiarity of these mountains seems to be that the higher the range the more ele-

* Somerville.

vated is the line of perpetual snow and the limit of vegetation. On the southern slopes of the first range the soil is cultivated at a height of ten thousand feet above the sea, but the grain does not always ripen. In Chinese Tartary, however, good crops are raised at an elevation of sixteen thousand feet above the sea. Captain Gerard saw pasture and low bushes up to seventeen thousand feet, and grain as high as eighteen thousand five hundred and forty-four feet above the sea—nearly as high as the summit of the volcanic cone of Cotopaxi.[a] There is good reason to suppose that the volcanic fires beneath the Himalaya mountains have some influence on the surface temperature of these elevated regions.

The climate of a country is dependent to a considerable extent on the position and direction of mountain chains, and especially, other things being equal, on its general elevation above the level of the sea. The temperature diminishes one degree (Fah.) for every three hundred and thirty-four feet of altitude within certain limits. Those mountain chains which give a region of country a slope in a southerly direction, thus enabling the sun's rays to fall more nearly perpendicular on the surface, increase the temperature, and in a ratio dependent on the perpendicularity of the rays. Those countries whose surface slopes to the north and which consequently receives the solar rays more obliquely, are oppositely affected, and the annual temperature is correspondingly low.

In the Alps of the Valais, the vine can be seen on one side in luxuriant growth, while on the other the surface is covered with snow and ice. A like effect is produced by the Himalaya mountains. The terraces and sloping plains which descend from the extensive table-land of central Asia, on the north, to the steppes of Siberia, present, in the latitude of Edinburgh, a cold so intense as to freeze mercury; while, on the other hand, on the southern slopes, there flourish at different altitudes the pine-apple, the mango, the gigantic

[a] *Cosmos*, vol. i. p. 10.

otton-tree, and the sarel. This tropical vegetation extends here to an elevation of four or five thousand feet.*

The effect of altitude in modifying climate is shown in hose countries which contain mountain chains and table-lands. n the narrow and deep valley of the Valais in Switzerland, reat extremes of climate exist—"the cold of Iceland and he heat of a Sicilian summer." Vines grow to the height of wo thousand three hundred and eighty feet; trees to the eight of six thousand seven hundred; shrubs to eight thouand five hundred; a few plants to ten thousand six hundred, eyond which are a few lichens; while vegetation ceases at he height of eleven thousand feet above the level of the sea, mid arctic cold. Ætna is divided into three districts, each of vhich has a climate very different from either of the others. The island of Teneriffe, with its celebrated peak, presents nother example.

The delightful climate of the valleys of Cashmere, and portions of Hindoostan lying on the declivities of the Himalaya mountains, is owing to the elevation of those regions above the level of the sea. In these districts the temperature throughout the year is that of perpetual spring. The elevation of the plateaux in the range of the Andes in South America renders districts in that country, under the equator, not only habitable, but even a delightful place of residence for people possessing a European constitution. The inhabitants of Quito, at an elevation of nine thousand five hundred and forty feet above the sea, experience a genial and almost invariable climate, in which vegetation never ceases; while, on the one hand, they behold the elevated mountain ridges covered with perpetual snow, and on the other, at the distance of a few miles, there exists an intense and sickly degree of heat that oppresses the plains and lower levels. The same may be said of the table-land of Mexico. The ancient inhabitants of these countries selected these plateaux on account of the agreeableness of the climate. In the plains on the

* Moseley's *Astro-Theology*.

Andes many monuments of the Incas are still found in good preservation. Quito is to-day a populous city, well built and handsome, possessing universities and the comforts and luxuries of civilised life, and in a situation of unrivalled grandeur and beauty. Here, then, we find, on the very summit of the Andes, a world by itself, with its mountains and its valleys, its lakes and its rivers, its populous towns and cultivated fields.

> " Always and everywhere at home,
> Man pitch'd his tents, adorned his bowers,
> Built temples, palaces, and towers,
> And made that Alpine world his own,
> The miniature of every zone,
> From brown savannas parched below,
> To ridges of cerulean snow."

The views of extensive regions of the earth's surface which may be had from the summits of some mountain peaks are the finest that can be imagined. Mount Ætna, in Sicily, near the eastern coast, the largest volcano in Europe, and celebrated from the remotest antiquity for its magnitude and eruptions, has an elevation (ten thousand eight hundred and seventy four feet) sufficient to afford one of the grandest prospects from its summit. It was here, according to ancient mythology, that the forges of the Cyclops were erected, where, under the direction of Vulcan, the thunderbolts of Jupiter were prepared. On a clear day this volcanic mountain can be distinctly seen from Valetta, in Malta, a distance of one hundred and fifty miles. From the top of the cone, which is about ten miles in circumference, and a quarter of a mile in perpendicular height, there is presented one of the most wonderful and sublime sights in nature. To the traveller who arrives just after the dawn there soon begins to appear a fiery radiance behind the Italian hills. The fleecy clouds are tinged with purple, the atmosphere becomes strongly illuminated, and, reflecting the rays of the sun, glows with a bright effulgence. In a little while the sun is seen rising from the ocean, the highest top of Ætna catches the first tremulous ray, while all below is dark

and confused. The hills, immediately below the highest peak, are illuminated, and the spectator seems as if seated in some desert isle in the midst of the watery waste. The radiance is now rapidly diffused. The forest seems a new creation rising to the sight, and catching life and beauty from every increasing beam. Now appears the extensive plain of Ætna, with its towns, hamlets, and monasteries, the cities of Sicily and its parched shores, with its dashing waves and the wide expanse of the ocean. On the north and south are seen hills and mountains, with rivers among them, appearing like lines of glittering silver, winding their course through rich and fertile fields, and washing the walls of twenty cities. The view on every side seems boundless. On the north are seen the islands of Lipari, with their smoking summits, the straits of Messina, and the coast of Calabria ; and on the south Malta is described at a distance in the very edge of the horizon.*

In regard to the formation of mountain chains we may remark that, while many of them, as we have mentioned, follow the direction of the coasts and the greatest length of the continents and peninsulas, "the great majority of mountains in Asia, east of the dividing Urals, will be found converging in their *strike* or line of direction toward the highest Himalaya, Hindoo-Koosh, and Krun Lun peaks, while those west of the Ural mountains, including those of Arabia and Europe, are seen to tend to the highest mountains in Europe, the Alps, as a central focus."†

Since rivers have their courses along valleys which owe their existence to high lands, their direction is determined by that of the mountain chains on the continents where they exist. The Amazon owes its great length and immense volume of water to the position of the Andean chain so near the Pacific coast. Mountain chains and table-lands become the sources of rivers by condensing the atmospheric vapor which thus falls in abundance on such situations, where it accumulates as snow

* Worcester's *Sketches*.

† *Key to the Geology of the Globe*, by R. Owen, M.D., p. 87.

and ice during the cold season of the year, and thaws to a greater or lesser extent, according to the situation and altitude, in the warm season.*

The highest mountain in North America is the volcano of Popocotapetl (seventeen thousand seven hundred and eighty-three feet), in Mexico; the highest in South America, so far as known, is Aconcagua; the highest in Europe is Mont Blanc; the highest in Africa is Mount Kenia; and the highest in Asia, the highest in the world, is Mount Everest, two and a half times the height of this last, and equal very nearly to the height of the other four. If we were to place Mount Ætna on the summit of Cotopaxi the two would represent the height of Mount Everest. To this we need hardly add that the sublime, the beautiful, and the useful are united in the physical world.

NOTICES AND CRITICISMS.

SCIENCE.

Annual of Scientific Discovery; or, Year-Book of Facts in Science and Art, for 1870. *Exhibiting the more important Discoveries and Improvements in Mechanics, Useful Arts, Natural Philosophy, Chemistry, Astronomy, Geology, Biology, Botany, Mineralogy, Meteorology, Geography, Antiquities, etc., together with Notes on the Progress of Science during the year* 1869; *a list of Recent Scientific Publications; Obituaries of Eminent Men, etc.* Edited by JOHN TROWBRIDGE, S.B., Assistant Professor of Physics in the Massachusetts Institute of Technology, aided by SAMUEL KNEELAND, M.D., Professor of Zoölogy and Physiology in the Institute, and W. R. NICHOLS, graduate of the Institute. 12mo. pp. xxii, 354. Boston: Gould & Lincoln. 1870.

No one, after reading the title-page of this book, can complain that it does not promise enough; if the publishers had copied Hawthorne and

* "The *electric resources* of mountains is an electrical phenomenon which seems to depend on the position of peaks composed of sharp projecting rocks among or near the clouds."—*Smithsonian Report*, 1868, p. 243.

called it "A Wonder-Book for boys and girls," the title would have been more concise and quite as characteristic. Neither can it be objected that the Massachusetts Institute of Technology is not fairly represented, as a professor, an assistant professor, and a graduate of that establishment are credited with the production of this work. So much for the title-page, which is still insufficient for the proportion, as to original matter and style, which it bears to the entire book.

The French have several excellent scientific year-books, among which may be particularly mentioned the "Annuaire Scientifique." These are carefully prepared by truly able hands, and we have often wondered why some enterprising publisher in this country did not procure a good translation of one of these issues, and thus give the American public something more satisfactory than the pompous and absurd compilation whose title we have transcribed. We do not know that there is sufficient appreciation for a good publication of the sort in this country; but, at least, we should presume that a suitable book ought to meet as encourging a reception, especially among men interested in science, as a compilation from newspapers and other periodicals.

The leading idea with the compilers of this annual, as with our newspaper publishers, seems to be to create a sensation. Like the newsmongers, they depend upon the public appreciation of what is startling; it does not matter about facts—the people must and will be interested; and if events are not sufficiently wondrous in themselves, they must, at least, be made to appear so. In "Notes by the Editor," it is said, apparently with a feeling of regret and compulsory admission, "In electricity we have no startling discoveries to chronicle."—p. ix.).

In other sciences, however, there were, fortunately, what might be represented as startling discoveries. At all events the newspaper accounts of these facts, and which are appropriately copied in the "Annual," represent some of them as exceedingly wonderful. Take, for example, the account of the moving of a large building in Boston, and the report of the astounding circumstance that "A great number of screws twenty-one inches long were employed."—(p. 54). Then, if there is not enough of a sensational nature that has been discovered, there is a great deal going to be. For instance, we learn that a California architect proposes to construct "earthquake-proof buildings."—(p. 122). Here is another amazing thing that is to be done:

"One of the most important works on the Union Pacific Railroad—the construction of a bridge across the Missouri river at Omaha, four hundred miles west of Chicago—is about to be commenced by General G. M. Dodge, engineer of the Union Pacific Railway."—(p. 49).

The Union Pacific Railway and its marvellous doings, past, present, and future, receive quite their due share of attention in this book. The first piece of information presented in the body of the work is the

time-table of this road, followed by an account of connections, arrangements for mails, etc. It reminds us at once of a country newspaper advertisement—but the journals generally get paid for these articles; of course we cannot suppose that the publishers of this book have been paid for advertising the Union Pacific Railway, especially as they are, or at least used to be, before the war, very pious, orthodox gentlemen of the "unco good" school. Be this as it may, their present book is very largely made up of quotations of all sorts from a great variety of journals.

As a digested compendium of scientific discovery, which it should be, the work is worse than a failure. Indeed, whether from weakness of stomach on the part of the editors, or other cause, the facts—such as they are—here collected cannot be said to be digested at all; perhaps it would take something of the ostrich nature to accomplish that feat.

Years ago the Messrs. Gould & Lincoln used to issue some excellent books; indeed none issued better of their kind. But there has been a falling off of late which we sincerely regret. Instead of the fine standard works of former times, those which now bear the imprint of that house—generally school books—are no better, if not still worse, than the "Annual of Scientific Discovery."

The volume for 1871 has just been received, but of no series can it be more truly said, *ex uno disce omnes.*

The Descent of Man, and Selection in Relation to Sex. By CHARLES DARWIN, M.A., F.R.S., etc. With illustrations. In two volumes. Vol. I. 12mo. pp. 409. New York: D. Appleton & Co. 1871.

THE publication some years ago of Mr. Darwin's book on "The Origin of Species" created a considerable stir in the scientific world. His theories were not new, but they were sustained with so much ability, and, as he arrayed his facts to support them, were so plausible, that it was not easy to dispose of him, as of his predecessors in the same field, as an absurd visionary or a superficial speculator in science. A party was found ready to adopt his views, and to labor to promulgate and extend them. Others strenuously opposed these theories and their tendencies; some because they could not see that the proof adduced sustained, or even rendered them probable, while others believed them antagonistic to the christian faith. A fourth class readily conceded Mr. Darwin's ability and the cogency of much of the proof he brought forward, yet thought it proper to await further investigation, and a thorough review of all the known facts of science before jumping to conclusions so much at variance with generally-accepted opinions.

Mr. Darwin followed up his first publication by another on "Variation

of Animals and Plants under Domestication," and has now brought out the book which, when completed, will doubtless finish the revelation of his theories. This last work really adds nothing, theoretically, to the obvious conclusions to be derived from his book on "The Origin of Species." It is true, he did not, in that work, venture to carry his theory to the extent of accounting for the origin of man, but the inference was so apparent that other men of science, like Huxley and Lyell, boldly announced and advocated the extension of the principles where Mr. Darwin had been too timid to venture. He says, in the introduction to the book before us, that he had not originally intended to publish his speculations upon the origin and descent of man, but that he had pursued his investigations "rather with the determination not to publish, as I thought I should thus only add to the prejudices against my views."—(p. 1). Finding his theories accepted and his suggestions carried out by men of acknowledged standing, he now comes forward to avow these principles as his own, and to claim the honor of being their discoverer.

This volume is divided into two parts, the first treating of the descent of man, the second of sexual selection. This second part properly belongs to the subject as discussed in the work on natural selection, the treatise upon the descent of man being really the crowning portion of his work. He intends, however, to apply, in a forthcoming volume, the principles here investigated to the human race.

Mr. Darwin confines himself entirely to man's material origin, any further speculations being beyond the domain of physical science. With the origin and growth of mind, and the moral faculties, he has nothing to do. As he says, "In what manner the mental powers were first developed in the lower organisms is as hopeless an enquiry as how life first originated. These are problems for the distant future, if they are ever to be solved by man."—(p. 35.) He is very cautious in his statements, and, however his theories may conflict with existing beliefs, seems to try to avoid carrying them out to such an extent as will bring him into antagonism with ancient prejudices. "The question is, of course, wholly distinct from that higher one, whether there exists a Creator and ruler of the universe; and this has been answered in the affirmative by the highest intellects that have ever lived."—(p. 63.)

Were our grandparents apes, and our more remote progenitors oysters? is the gist of the question of which Mr. Darwin maintains the affirmative. Into the mazes of scientific discovery, curious and instructive as are many of the facts set forth in this volume, we have not space to enter. The majority of readers will be concerned only with results and conclusions, none but naturalists being able thoroughly to sift the evidence adduced. Some phenomena which our author brings forward as authentic could be shown to be at least questionable, and that upon the

best authority. As to the similarity of the germ of life in man and the lower animals, and the near approach we make to being born with tails (see pp. 15. 28–9), we think it not worth while to be frightened, as, according to this theory, the tendency is to advance toward more nearly perfect forms.

The ancient doctrine of metempsychosis is substantially reaffirmed in Mr. Darwin's system, though he says nothing of the individuality of the soul through all the various bodily transformations, and we presume would not venture thus to apply his principles. There is beauty and a valuable suggestion to humanity in this idea. If animals were deemed, even possibly, our progenitors, we should be inclined to treat kindly the beings who are developing toward a higher state; perhaps, even, we would cease to eat them.

The theory that man has developed from lower forms of animal life is not, as we have said, original with Mr. Darwin. It appears to have been first promulgated in modern times by the French naturalist, Lamarck, in his "Philosophie Zoologique." Mr. Darwin has, however, advanced his views leading to the same point so gradually, so cautiously, and with so much show of scientific research, as to gain considerable credence for his system, while it was at once scouted as put forward by his predecessors.

The conclusions of all thoroughly scientific naturalists have, however, been to the effect that there is permanency of type in the animal kingdom, admitting, so far as our knowledge extends, of only variations, but never tending to form distinct species. As to the invariability of the human race, it seems to be beyond question so far as we have any data. The proof may be found in the works of such thorough investigators as Buffon, Campollion, De Gobineau, Blumenbach, Cuvier, Pritchard, and Figuier. As to what is the germ of life, or how life is produced, all admit that it is useless for physical science to enquire. From the earth, the universal mother of material forms, spring a great variety of plants. We do not see that these diversified forms tend in any manner to approach each other, but rather the contrary. There is no process that will, in time, produce oaks from briers, or fruit-trees from nettles. We are all dust, that is certain; but how or why particles of earth are animated, and resolve themselves into living organisms, we cannot know.

The Duke of Argyll, in his "Reign of Law," says that, "whatever may have been the method or process of creation, it is creation still," which is as much as to say, that if a thing is, it is, however it came to exist; and that conclusion, unsatisfactory as it may be, is probably about all that we can attain in this sphere from scientific research. Our philosophers, with all their speculations, cannot tell us what mind is, or how it differs from matter, or acts upon it; still less can they satisfactorily explain

the cause of the unceasing movements of the heavenly bodies, and the constant activity of all portions of the universe. Looking downward, and studying strata and insects, they may imagine, as does Mr. Darwin, that they have discovered the laws of material life, but looking upward, they may well conclude that in their presumption they are indeed but little removed from the anthropomorphous apes.

Contributions to the Theory of Natural Selection. A Series of Essays. By ALFRED RUSSELL WALLACE. Author of "The Malay Archipelago," etc., etc. Second Edition, with Corrections and Additions. 12mo. pp. xvi. 384. New York: Macmillan & Co. 1870.

THE promulgation of Mr. Darwin's theory has brought a flood of literature which seems likely to be indefinitely swelled. All natural philosophers are interested in controverting these views, in attempting to add something to them, or in showing that they had adopted them before they were published by Mr. Darwin. Mr. Wallace belongs to both the second and third of these classes.

The two first essays in this volume, first printed in 1855 and 1858, respectively, certainly demonstrate that Mr. Wallace had some conception of the doctrine of natural selection before Mr. Darwin's work was published. The author scarcely claims more, and his modesty—we might say magnanimity—is commendable:

"I have felt all my life, and I still feel, the most sincere satisfaction that Mr. Darwin had been at work long before me, and that it was not left for me to attempt to write 'The Origin of Species.' I have long since measured my own strength, and know well that it would be quite unequal to that task."—(Preface, p. iv.)

The essays which cover the same ground as Mr. Darwin has passed over are not specially interesting to those familiar with the views of the latter, although they contain something new in the way of illustration. The article upon "Instinct in man and animals" promulgates a curious view, to the effect that what we call instinct in brutes may be, and probably is, an exercise of their faculties in the same manner as man uses his reason. "The Philosophy of bird's nests," and "A Theory of bird's nests," are to the same effect. The essay entitled "The limits of Natural Selection as applied to man," is an attempt to show how far the Darwinian theory may be carried and where it must stop. There are some things, Mr. Wallace believes, which natural selection cannot do. The skin of man, his hands and his feet, our author believes, could not have been produced by that means. His mental powers and his moral sense, especially, are beyond the range of this theory. As to Mr. Wallace's speculations upon "The Nature of Matter," his belief that "mat-

ter is force" (p. 365), and that "force is a product of mind," we believe it to be as good, perhaps, as a majority of theories upon this subject. If it could lead where he thinks it will it would certainly be a grand conception:

"The view we have now arrived at seems to me more grand and sublime, as well as far simpler, than any other. It exhibits the universe as a universe of intelligence and will-power; and by enabling us to rid ourselves of the impossibility of thinking of mind but as connected with our old notions of matter, opens up infinite possibilities of existence, connected with infinitely varied manifestations of force, totally distinct from, yet as real as what we term matter."—(p. 370.)

We must concede Mr. Wallace the praise of stating his propositions with unusual clearness, and always with becoming modesty.

The First, Second, and Third Parts of a Work on Government. By J. B. COLT. Pamphlet. Hartford: Case, Lockwood & Brainard. 1870.

IN our last number we reviewed the first part of this work, promising, at a future date, to take up the remainder, which neither time nor space then allowed us to do. The second part is written in verse, with a peculiar rythm which seems, very suitably, to be an imitation of some of the Scandinavian metres, and which is well adapted to satire. We should not expect any ambitious poetic flights in a satirical work on such an every-day topic as the subject of this brochure.

The spirit of the old Saxon, Hengist, has been invoked, and it is he whose views are presented in Part II., though he is interrupted occasionally by Republicus, with question, commentary, or attempt at refutation. Hengist is represented as no admirer of some things which he finds in this republic, and he expresses his dissatisfaction very freely. He does not see that in changing our names for things we have altered the things themselves, in spirit or essence. Hear him:

"Prince or Editor! both in the same place;
How do they differ but in the word-name.
* * * *
Prince or Editor, both are destructives;
Both in common prey upon society,
Both from their stand-point act for gain to live,
To earn food and fame to satiety."—(p. 29.)

This is not very complimentary to either prince or editor, but both are used to be made occasional targets of. The hits at politicians are, many of them at least, fully deserved. No one escapes the shafts of the Old Northman's satire, which have sometimes a force like the hammer of Thor. The following is certainly pointed:

> "Society is in men and women,
> Not in their houses! Put into them rats,
> Is society rat or house?"—(p. 34.)

The old Saxon warrior has not only a good appreciation of the general order of things in this country, but he is also able to forecast our future to some extent. His prophecies have, doubtless, a basis of probability, reckoning from the past progress of the country and the resources at our command. It is a great country that he sees in the future, "the last sunset of the second century," when we are to have "a thousand millions of people for empire." Seeing all this we do not wonder that he becomes enthusiastic:

> "Why, it's not magic, but is stern old fact,
> A continent is to be peopled full,
> The swelling tide of population impact
> Rushing, wave on wave, like Norway's swelling pool,
> Dashing and surging on time with its wing!"—(p. 87.)

There is a very good hit at Mrs. Stowe and the Byron controversy:

> "Bushnell on women, he in his old age
> Must give way to *Stowe in a quandary*,
> Not about Byron as poet or sage,
> But 'my Lady Jealousy' like, of Laundry.
> * * * * *
> But really who dares complain of right in women,
> To set three spirits (dead) to quarrel, like true-men."—(p. 42.)

In the third part the author again returns to prose, and his three interlocutors carry on their discussion as to the best form of government. The monarchist is allowed to have most to say in this chapter, but the republican interposes some forcible arguments and objections.

There is a good field for the exercise of talent on the subject which Mr. Colt has taken up. There is no reason why such discussions cannot be carried on without personalities or abuse, as the present author demonstrates; while the subject in itself is calculated to call forth the writer's powers, and the general interest in these matters would be likely to secure an abundance of readers who are tired of abuse and slang. The greatest wits of Great Britain have exercised their pens in treating of party questions. The field in this country is still wider, and we hope to see more who will enter it in the spirit, at once manly, lively, and philosophic, of the author of this *unpretending*, but really interesting and suggestive work.

The Study of Government. By George H. Yeaman. 8vo. pp. xvi. 718. Boston: Little, Brown & Co. 1871.

In his brief and modest preface Mr. Yeaman informs us that this work has remained for some time finished and unpublished, "owing to the

author's information of the little encouragement generally given to such works." He also ingenuously confesses that "an earlier inquiry upon that point would have saved him much hard labor," and that "the work would have slept forever but for the encouraging words of a few whose opinions the author was bound to respect."

With a frank confession of inexperience, Mr. Yeaman also indicates that his tastes and aspirations are above the general appreciation. We hope that the encouraging words of the few who care for such works, and the pleasure he declares he has taken in his task, will be a sufficient compensation, for we are not sanguine of any other considerable rewards for enterprises of this kind. The study of government, as Mr. Yeaman has pursued it, must be very profitable intellectually, though neither fame nor fortune is likely to result from his book.

The author has consulted many excellent authorities. He gives us a compilation of opinions that is valuable, besides his own conclusions, observations, and arguments, indicating a mind imbued with the subject. He does not attempt any daring originality, rather arguing against than undertaking to present entirely new thoughts, and sustaining his position in this respect by reference to the practice and opinions of some of the best writers upon law and government. Mr. Yeaman's mind we should judge to be a legal one; he knows the value of precedent, and acknowledges the cogency of recognized authority.

The work is American, and is written from the republican standpoint; yet it is by no means narrow. The author seems to have a fair appreciation of other forms of government, as adapted to diverse peoples in peculiar circumstances. Had Mr. Yeaman followed his original plan, and given only conclusions, we believe his work, from its greater condensation and smaller compass, would have found more readers, but we doubt if it would have been more valuable than it is now, with the many quotations he makes from the best authorities. At all events, we commend his modesty in assuming that his own thoughts are of less importance than those he copies. Mr. Yeaman is not at all destitute of power of thought. The speeches which he has delivered in the national House of Representatives and elsewhere, and which he gives us in an appendix, are creditable efforts of their kind.

The Reign of Law. By *The Duke of* ARGYLL. First American, from the first London, edition. 16mo. pp. xxvii, 462. New York: De Witt C. Lent & Co.

As several editions of "The Reign of Law" have been issued in this country and in England, it is needless for us to review the book. There are but few of our readers who are not more or less familiar with its

character, and we think we can claim that it is not our habit to tell those whom we address what they know already. We may say, however, for the benefit of such as may not have seen the book, that it takes an extensive range, reviewing the laws of nature in connection with their most interesting phenomena. This will be understood even from the briefest glance at the multifarious topics treated—such as Man's Agency; relation of that agency to Physical Laws; the Development hypotheses; fertilization of Orchids; Religion and Science closely connected; Laws of Kepler; Gravitation the best example of what law is; Languages grow according to rules; Life the cause of organization; apparent exceptions to the supremacy of Purpose; Darwin's theories, affinities and differences between Man and the Lower Animals; theories of Man's origin; the Reign of Law in the realm of Mind; Law in politics, etc., etc.

In his discussions and criticisms the Duke disposes of many fallacies once not only popular, but dignified with the title of sciences. As an instance we may mention his views on Phrenology; although they differ in nothing from those which we gave, ourselves, several years ago, in this journal, as the reader may see.* "No additional knowledge is given to us," says our author, "of any one mental faculty by proving that it is connected with some special bit of the mysterious substance of which that organ is composed."—(p. 280.) Further on in his discussion the Duke says:

"Phrenology is no longer popular, as it once was, among physiologists. Its mapping of the brain is now generally admitted to be imaginary. But the fundamental error of the Phrenological School did not lie merely, or were mainly, in any mistake as to the mapping of the brain. It lay in the idea that a Science of the mind can be formed in any shape or form upon the discoveries of anatomy. Their error lay in the notion that Physiology can ever be the basis of Psychology. And this is an error, and a confusion of thought which survives Phrenology."—(pp. 281-2.)

We could give extracts from "The Reign of Law" on many other subjects, in which views we have put forward in this journal are fully corroborated. By this, however, we do not mean but we have profited not a little by the perusal of the work. Apart from the research which it everywhere exhibits, it contains much of that sound common sense—not to call it philosophy—so characteristic of Scottish authors.

HISTORY.

The History of Greece. By Professor Dr. ERNST CURTIUS. Translated by ADOLPHUS WILLIAM WARD, M.A., Fellow of St. Peter's College, Cambridge; Professor of History in Owen's College, Manchester. Vol. I. 12mo. pp. 509. New York: Charles Scribner & Co. 1871.

* Vide N. Q. R., No. XIV., Art. "Spuriousness and Charlatanism of Phrenology."

THE volume before us includes two books of Dr. Curtius' history, treating of "The Greeks before the Dorian migration," and the period "From the Dorian migration to the Persian Wars." There are several valuable histories of Greece, some comprehensive and others partial, among which may be mentioned those of Thirlwall, Grote, and Niehbur; but, judging from this volume, no abler pen than that of Dr. Curtius has yet treated this important subject.

The facts of history, after flowing through the brain of the author of this work, are by no means dry; they come forth enriched by generous scholarship and a vivid imagination. The period of the earlier history of Greece,—from the time when we have any authentic account of it—is, in most narratives, a mass of conjecture laboriously or garrulously set forth, and chiefly interesting from the great importance of the subject in its bearings upon the subsequent annals of a most remarkable people. A man of some research and of prolific fancy might give us a narrative which would be attractive, while totally worthless historically. Dr. Curtius has brought forward all the accessible facts connected with his topic, and has illustrated them with an abundance of striking thoughts, and a style at once warm and lucid.

We have followed our author with an unusual fascination, through his descriptions of the Hellenic land and people, the pre-historic age, the earliest states, the various migrations and settlements, and his account of the several Grecian commonwealths and colonies. The subject is in itself inspiring, but we are willing to attribute much of the interest we have felt in the perusal of these pages to the power of the writer, and particularly to his evident absorption in his subject.

Dr. Curtius is a firm believer in an Aryan race, "which, in times immemorial, was settled in upper Asia and included the ancestors of the Indians, Persians, Greeks, Italians, Germans, Slaves, and Celts."—(p. 26.) His statements upon this subject, combining fact with conjecture, are curious and interesting; instance the following:

"It has been assumed, on good grounds, that the Celts, who pushed forward farthest to the west, were the first to separate from the main body and immigrate into Europe. The Celts were followed by the Germans, and last of all by the Slaves, united with the Letts (Lithuanians). These together form a North-European body of nations and languages."—(p. 26.)

The translation of this work, we remark in passing, is generally well done—at least, the English is usually good. But it is surprising to find such tautology as is contained in the above extract in the phrase "immigrate into." The discussion concerning the Greek language is peculiarly interesting and valuable. We cannot forbear a quotation:

"Where this language was spoken—in Asia, in Europe, or in Africa—there was Hellas, there was Greek life and Greek history. Long before the beginning of history the language stood fully finished, and long has its life lasted beyond the narrow period of

classic history; nay, it survives to this day in the mouth of the people whose tongue testifies to its connection with the Hellenes."—(pp. 33-4.)

Dr. Curtius' treatment of the Hellenic myths is also of absorbing interest, and especially so from his views of the origin and significance of those fables.. "What," he asks, "is more a nation's own than its gods?"—(p. 57.) And again, "To mythology belongs the poetic privilege of representing the glory of her heroes as the occasion of their fall."—(p.113). We have not space for a more extended account of this work, but think we have said enough to give our readers an intimation of its superior value and interest.

A Manual of Ancient History, from the Earliest Times to the Fall of the Western Empire, Comprising the History of Chaldea, Assyria, Media, Babylonia, Lydia, Phœnicia, Syria, Judea, Egypt, Carthage, Persia, Greece, Macedonia, Parthia, and Rome. By GEORGE RAWLINSON, M.A., Camden Professor of Ancient History in the University of Oxford. 12mo. pp. 633. New York: Harper & Brothers. 1871.

THERE was need of such a work as Professor Rawlinson has given us; a handbook of ancient history, reliable in its data, judiciously arranged, and written with clearness and brevity. Enough of so-called "manuals" we have, but few that can be put into the hands of students as guides to a knowledge of ancient times. Indeed, as the author remarks, there is not a really excellent manual of this kind extant which was written in English; there is only one in German, the "Handbuch" of Professor Heeren, and one in French, the "Manuel" of M. Lenormant. We are very glad to welcome such a book as the one before us from the pen of an Oxford scholar. The writer admits that he has, in the main, adopted the method of Professor Heeren, endeavoring, however, to bring his work to the present standard of knowledge.

Professor Rawlinson proposes to divide history into two portions, not separating them "by the arbitrary assumption of a particular date," but in accordance with his belief that "A truer, better, and more convenient division may be made by regarding as ancient all that belongs to a state of things which has completely passed away, and as modern, all that connects itself inseparably with the present."—(p. 14.) A reasonable and philosophic division, truly, could the line of demarcation as here determined upon be definitely fixed; but we apprehend some difficulty and well-grounded cause of dispute as to what is inseparably connected with the present and what is not. However, we have no fault to find with the period embraced as that of ancient history.

What strikes us at the outset, as a valuable feature in our examination of this book, is the list of standard works which is given in connec-

tion with every topic treated. This list of authorities, to which the student is referred for the purpose of prosecuting his researches, contributes not a little to render the publication an excellent guide. Indeed, as a rule, these references are all that we could desire. In some instances, however, we should include works not named in this volume, and in other cases there are excellent authorities which have been overlooked. In the domain of anthropology, for example, a writer whose preface bears date November, 1869, should not have omitted, to mention Louis Figuier's "Primitive Man," while referring—besides the book of Genesis—to Dr. Prichard's obsolete "Physical History of Mankind," and Sir John Lubbock's "Prehistoric Man."—(pp. 13–14.) The author frequently gives his critical opinions of works referred to, and in general his remarks are just.

In respect to historic facts, Prof. Rawlinson has, we think, somewhat too much confidence in a school of sceptical German writers, whose researches, though generally profound, have been pursued with the predesigned purpose of denying as much as possible. We do not counsel extreme credulity in historical matters, but here, as in religion, we think it safer, and certainly more pleasant, to believe too much than too little. The work of Ampère upon the recent discoveries among ancient Roman remains ("L'Histoire Romaine à Rome") quite ably, and with a basis of reliable fact, sustains a position the opposite of that of Schwegler ("Römische Geschichte") and Sir G. C. Lewis ("On the Credibility of the Early Roman History"). Professor Rawlinson declares that—

> "The names which tradition assigned to the early Roman monarchs seem to be fictitious. Romulus, Titus, Tatius, and Numa Pompilius are personifications rather than personages."—(p. 381; see also p. 378, sec. 9).

This work, fortunately, did not require Americanizing, yet, in publishing it for use in this country, it would have been well to adapt its money nomenclature to the United States rather than the British system (see p. 205). But, all deductions made, Prof. Rawlinson's "Manual" may be safely recommended as such to the student of ancient history.

The Recovery of Jerusalem. A Narrative of Exploration and Discovery in the City and the Holy Land. By Capt. WILSON, R.E., Capt. WARREN, R.E., etc. etc. etc. With an Introduction by ARTHUR PENRHYN STANLEY, D.D., Dean of Westminster, edited by WALTER NORRISON, M.P., Honorary Treasurer of the Palestine Exploration Fund. 8vo. pp. xxiv, 485. New York: D. Appleton & Co. 1871.

To the liberality of an English lady, and to the enterprise of the gentlemen who undertook the survey almost without remuneration, we owe this volume as it first appeared in England. The American publishers also deserve credit for republishing it in this country in so handsome a form. The explorations, an account of which is here presented, have resulted in securing a considerable amount of curious and valuable information upon a subject of great and general interest.

The greater portion of the volume is devoted to an account of the excavations and explorations in the city of Jerusalem, the remainder having reference principally to recent investigations and travels in other portions of Palestine. We have first presented "The Ordnance Survey of Jerusalem," by Captain Wilson, a succinct and lucid statement of the topography of the ancient city, and an account of the water supplies, to remedy the defects of which the survey was undertaken. Next follows a narrative of the "Excavations of Jerusalem," by Captain Warren, a very interesting paper, occupying more than half of the book. In the remaining articles we have instructive descriptions of other portions of Palestine, antiquities, etc. The volume is enriched with many maps, plans, and other illustrations.

As to the actual value of the discoveries made, it seems to us that the explorations have not been carried far enough to arrive at definite conclusions, especially upon the disputed points. Much light, certainly, is thrown upon Jewish history and tradition, and all engaged in the work deserve hearty praise for their endeavors.

BELLES-LETTRES.

Plutarch's Morals. Translated from the Greek by Several Hands. Corrected and Revised by WILLIAM W. GOODWIN, Ph.D., Professor of Greek Literature in Harvard University. With an Introduction by RALPH WALDO EMERSON. 5 vols. 8vo. Boston: Little, Brown & Co. 1870.

PROBABLY no writings of the ancients are better adapted for popular instruction than those of Plutarch. His "Lives" are the best known of his works; they are the most generally appreciated and the most valuable historically. Yet, for thought, and often for poetic beauty, the essays entitled "Morals" are most excellent. They comprise the writings of his earlier years, and are a veritable storehouse of interesting opinions, suggestions, and facts, while some of them furnish superior models of classical rhetoric.

Plutarch was, however, rather an interpreter and recorder, than a

ound original thinker. At least he was not a philosopher in the est sense of the term; he founded no school in philosophy and no in religion. He does not appear to have been desirous to hand his me down to posterity as the builder of a system. As a discourser on rals and manners, he reminds us of Cicero in his dissertations, but s less of an egotist than the orator—far less ambitious of per- nal distinction. He discoursed genially, being absorbed in his topic ther than in himself; he was more desirous that his hearers should ceive benefit from his discussions than that they should admire him. his disposition to keep self in the background has resulted in his eing less known personally than any other writer of his age whose works are so much read. He appears to have been a sophist, and a considerable portion of the "Morals" are probably a reproduction of lectures delivered by him, and of conversations in which he took part. He was a prolific writer, few of the ancients having produced more that is really valuable. In character he was evidently amiable, and he impresses us as a genuine lover of humanity. His erudition was extensive. He tried to be an eclectic in philosophy, being imbued with a catholic and tolerant spirit. Above all, he was of a religious turn, and he attempts in his disquisitions to reconcile religion with philosophy.

The treatises and essays of Plutarch, included under the general title of "Morals," embrace matter widely diverse both in form and material. The word *moral*, in its modern acceptation, does not properly designate a majority of these dissertations; but we must remember that the term was not selected by Plutarch but by his editors after his death. If we read his essays upon "The pro-creation of the soul," "How a young man ought to hear poems" (vol. ii.), "Symposiacs" (vol. iii.), "Of love" (vol. v.), "Whether an old man ought to meddle in state affairs," and "Of the face appearing in the orb of the moon" (vol. v.), etc., it will be seen how wide is the range of the discursive author, and how varied his ability to treat different subjects.

The "Symposiacs," a sort of table dialogues, perhaps give the most complete epitome of the mind of Plutarch, of any one work of his. They are not elaborate treatises, but are full of suggestion, and are exceedingly curious and instructive, containing flashes of merriment and a great deal of information upon the habits of the ancients. They are sometimes in the form of dialogue, then of recitation, and again of dissertation. Frequently two of Plutarch's essays form a sort of antithesis, and should be read together, for which purpose they should have been printed consecutively, which is not always done in this edition. Take, for instance, the two essays, "Concerning the fortune or virtue of Alexander the Great" (vol. i.), and "Concerning the fortune of the Romans" (vol. iv.), and we have an admirable discussion on virtue and fortune.

One of the chief excellences of Plutarch, if not the foremost, is the acquaintance we acquire through him with other Grecian and Roman writers. He quotes much, yet he has the faculty of making everything he touches his own. At this day, whether or not it was always so, he is most valuable and most interesting from his extensive knowledge of other authors whose thoughts he freely uses, and helps us to appreciate.

It is a pity we cannot have a good English translation of the "Morals" of Plutarch. The French have several, that of Amyot (1572) being excellent. The English translation executed "by several hands" was first published in 1684-94. Some of the translators, it is evident, were but imperfectly acquainted with the Greek language, if they could be said really to know it at all. Their pretended translations were not, in all cases, made from the original. The basis of the present version is the edition of 1718, which, it was claimed, was freed from the errors of former issues. That before us professes to be a still further improvement upon the one which it follows. The consequence is we have a version of Plutarch which is neither modern nor ancient English, but a sort of hybrid. It is certainly not a fair rendering of the original. What we want is a translation of Plutarch direct from the Greek. Such a work is quite possible, notwithstanding the many difficulties of the original text. At least we can have our author rendered into good English, and be spared such barbarisms as "modestest" (vol. i. p. 64), "perfecter" (vol. ii. p. 204), "finify" (*ib.*, p. 257), and numerous others which we have noticed.

But, notwithstanding these defects, the publishers deserve much credit for presenting Plutarch's "Morals" to the American people in so handsome a form. This will be the more readily admitted if it be borne in mind that, whatever its faults are, it is the best English edition extant. We hope, therefore, that they will receive a due recompense for their enterprise; especially as there are none of our publishers to whom the public are more indebted for correct and tasteful editions of the best English classics—such, for example, as their fine edition of the British poets from Spencer to Moore.

Chips from a German Workshop. By F. MAX MÜLLER, M.A., Foreign Member of the French Institute, etc. Vol. III. Essays on Literature, Biography, and Antiquities. 12mo. pp. 492. New York: Charles Scribner. 1871.

THIS volume completes the collection of occasional essays to which Mr. Müller has given a title not very dignified nor always appro-

priate. Some of the articles have no connection with the German language, literature, or people. There is, however, much valuable matter in these volumes, as there must be in a publication embodying the results of the researches of an earnest student. Mr. Müller has a marked enthusiasm for everything German or of German origin—which we should expect from his name, and the acknowledged direction of his studies. His extreme interest captivates in turn his readers, who know less of the subjects he is treating than he does. This, which is quite natural, furnishes no reason for complaint, but it might properly lead a thoughtful person to examine carefully the groundwork of Mr. Müller's reputation, and the interest he claims for the studies in which he has been absorbed.

In looking over the present volume we have been first attracted by the last portion of it, the letters of Baron Bunsen. Mr. Müller says he hesitated long before deciding to publish these letters. As respects many of them, we believe it would have been more to his credit had he paused longer, and then resolved altogether to suppress these effusions written in the freedom of private intercourse, and with an evident purpose of patronizing the young aspirant. There are notes of recommendation and various commissions, and everywhere remarks flattering to our author's vanity. We do not hold Baron Bunsen responsible for what was designed only for the eye of a trusted *protégé*, but that Mr. Müller should publish them as a recommendation of himself and his book is of questionable taste, to speak very mildly. Taken in connection with the article on Bunsen, in this volume, they remind us of the reciprocally laudatory epistles of Della Crusca and Maria Matilda. Yet some of the letters contain valuable matter. Such is that numbered "66," concerning a work which the two proposed to execute. We give an extract, which we find very interesting:

"1. Ham is clear; it means *black*. 2. Shem is an honorary name (the glorious, the famous), but the old name is Adam, that is, Edom, which means *red*, reddish, φλόξ, this has given me great light. . . . . 3. Japhet is still explained in an incredible way by Ewald, according to the national pun of Genesis x. as derived from Patah, 'he who opens or spreads.' It is really from Yaphat, 'to be shining'—the light, *white*."—(p. 451.)

The opening essay of the volume is a dissertation upon German literature, which originally formed the preface to a collection of extracts from Teutonic literature. It is enthusiastic to, and sometimes beyond, the verge of grandiloquence. The following is certainly true, but we do not see why a majority of mankind should be expected to feel an interest in tracing the steps by which certain results have been achieved:

"The interest, however, which Englishmen take in German literature, has hitherto been confined almost exclusively to the literature of the last fifty years, and very little is known of those fourteen centuries during which the German language had been growing up and gathering strength for the great triumphs which were achieved by Lessing, Schiller, and Göthe."—(p. 2).

The chapter on "Old German love-songs" is the most interesting in the volume. That on Schiller was evidently written for some periodical, *apropos* of the centennial anniversary of the poet's birthday in 1859. It does not impress us as entirely equal to the subject, especially when the author says that "Poets of higher rank—as Dante, Shakspeare, and Göthe—have never aroused such world-wide sympathies, etc."—(p. 76.) Who is to determine Schiller's rank? We, at least, would rather have the favorable verdict of the public, which Mr. Müller affects to despise, than that of any clique of critics; that is, when popularity is gained legitimately, and not by truckling to low tastes or vicious propensities, as it certainly was not in Schiller's case. In "Wilhelm Müller" we may, but not carpingly, presume our author to have become interested from the coincidence of name, for there is surely nothing specially attractive in this indifferent German poet, though his interests in the Greeks and in Hellenic literature was creditable.

The chapter "On the language and poetry of Schleswig-Holstein" is very good. There is something in the article on "Joinville," and that on "Bacon in Germany." As to the question, "Are there Jews in Cornwall?"—to the elucidation of which query a chapter is devoted—we presume that very few outside of Cornwall will care whether there are or not. The concluding chapter of the volume, the grand *finale* of the entire work, the author has devoted to Bunsen. It is proper that Mr. Müller should appreciate Bunsen, for, judging from the letters hereunto appended, Bunsen appreciated Müller. Considering this mutual admiration, we are scarcely surprised that even a Prussian king should say, "I am hungry and thirsty for Bunsen" (p. 388), still less are we astonished that Mr. Müller should become enthusiastic over his patron.

Making due allowances for prejudices and personal weaknesses, there is much interesting reading in the three volumes of Mr. Müller's "Chips"; so much indeed that they are worthy of a place in any library. If he will extend his studies, and learn to appreciate other literatures as well as the German, he will acquire a more catholic spirit and a more correct taste.

EDUCATION.

Elements of Composition and Rhetoric, Practical, Concise, and Comprehensive. By SIMON KERL, A.M.; Author of "First Lessons in English Grammar," "Common-School Grammar," and "Comprehensive Grammar." 16mo. pp. 408. New York: Ivison, Phinney, Blakeman & Co. 1870.

A GOOD text-book on composition for the use of younger students is doubtless a desideratum; at least we should judge that the want was recognized from the many attempts made to supply it. A universal panacea for the ills that flesh is heir to is also desirable. We doubt if the infallible curative, the elixir of life, has been found by any of the advertisers of nostrums; we are not persuaded that any of the authors of recent works on rhetoric, which have come into our hands, has discovered and pointed out a royal road to literary excellence and undying fame. At least, we fear that if any one makes the discovery of a north-west passage through the intricacies of composition, Mr. Simon Kerl, A.M., author of, etc., etc., is not the man.

There are many excellent standard text-books on rhetoric, such as those of Blair, Kames, Campbell, etc., wherein the principles of taste and criticism are set forth, and the study of which cannot fail to be beneficial to the young. It is possible that we need a work which shall give the writer more practical directions than are contained in these standard treatises. Generally, however, any one who is prepared for the study of rhetoric at all, will find no difficulty in mastering, especially with a competent teacher, any of the works we have mentioned, or any others which are recognised by experienced educators as reliable guides. We are certain that those who depend for their instruction upon works of rhetoric "made easy," will never acquire either facility or excellence in composition. To write well requires diligent labor, and he who insists on having his literary path smoothed for him, will find that it leads to no desirable goal.

The publishers of this performance have been issuing what they call "The American Educational series of school and college text-books." It is very kind of them to undertake to provide for the educational wants of the American nation, especially as, in most of their publications of this sort, they do it so thoroughly—that is, if we are to believe their own and their authors' claims—that intellectual labor is to be almost entirely done away with in getting an education hereafter. Most cheerfully do we admit that there was a time when this house used to issue some excellent text-books for common schools; but whether the fact was merely a coincidence or not, it is certain that since its head turned his attention to insurance, becoming a director in one of the new brood of miraculous companies, a sad degeneracy in its book department has taken place.

The work before us is to be regarded, we presume, as a portion of this wonder-working American series. In conjunction with the author's grammars, the American youth are to be taught the English language in an incredibly short period, and without effort on their part; these treatises being arranged on a new and, confessedly, very extraordinary plan, which throws all the labor that shall contribute to the student's

progress upon the teacher. On the title-page we are told that the present work is "practical, concise, and comprehensive." In his preface our author says:

"A book seems to have been long needed that shall teach, in the most efficient manner, *Grammar*, *Composition*, and *Rhetoric combined*. Such a book I have endeavored to make of this when taken in connection with any small grammar that contains merely the accidents of the science."

We give Mr. Kerl's own italics, which show how modest was his undertaking. In "directions to the teachers," he declares, "I have been severely studious of brevity." Of four hundred pages, comprising the work proper, quite three-fourths are taken up with instructions to teachers, trashy "exercises," selections from authors, etc. Into the remainder, we are to believe, he has compressed a complete treatise on "Grammar, composition, and rhetoric combined." One must be very "severely studious of brevity" to accomplish this in so small a compass. Let us see to what this severe studiousness of brevity leads. Here is the first definition:

"COMPOSITION is the art of finding appropriate thoughts on a subject and expressing them in proper language and order."—(p. 7.)

No reliable rhetorician would approve the construction of this sentence. Then it is indefinite. Is there no composition which does not consist in "*finding* thoughts?" Here is another definition:

"LETTER-WRITING is the exchange of thoughts between absent persons."—(*ib.*)

Mr. Kerl evidently believes in thought, though he does not, we fear, help those who use his books to find it. It strikes us that it is possible to regard two persons as "absent" from their home or country, while they might be together, and have no occasion for communicating by letters. Again, using our author's style of expression, we might say that two *present* persons could write letters to each other, although such a proceeding might be unusual. If he had said that letter-writing is a method of communication between persons by means of written language, his definition would at least not have been absurd. He afterwards admits (pp. 203-4) that there are letters not included in his definition—as letters to newspapers, etc.

At the beginning of lesson viii, the student is *encouraged*, in the largest type, in this manner:

"We have probably advanced sufficiently far into this book, especially when we consider the last lesson, to show the teacher how barren the minds of most children naturally are, and how little of originality is in them, except *original ignorance*."—(p. 23.)

We despair of being able to give any definite idea of the plan of the work, for, on diligent examination, we cannot discover that it has any. He endeavors to treat every topic, from punctuation to poetry, and disposes of everything in the most superficial manner. One of his "directions" we can commend to the author in particular, and especially the last sentence:

"TRASH.—Silly, empty, or trashy expressions should be carefully avoided. Nothing else sooner destroys a man's influence."—(p. 383.)

We imagine that Mr. Kerl had not an alarming amount of influence to be destroyed by this volume; what he has he seems anxious to get rid of. His efforts in this direction, at least, are deserving of success. Here are some of his illustrations of sentences:

"2. Propositions or sentences may be—
1. DECLARATIVE.—'Mary shuts the door.'
2. INTERROGATIVE.—'Does Mary shut the door?'
3. IMPERATIVE.—'Mary, shut the door.'"

And so on through all possible changes and variations, until we should expect the poor student to wish that Mary would leave the door alone, or that the "rhetoric" would have done with both Mary and the door.

Pages are filled with addresses, headings, and superscriptions of letters, and directions therefor; specimens of reception, invitation, and wedding cards, etc., etc. (pp. 134, 205, 6, 8, 9, 13, 25, 26, etc.) The samples of letters given are certainly unique. We have letters from schoolboys and girls *ad nauseam*, letters of introduction, applications for quack medicines (p. 227), and similar trash.

In all departments of the work it is the same; there is page after page of exercises and specimen sentences, such as "I have a little chair." "Our baby has a high chair." "We have a rocking chair (p. 24). And in this way it is proposed to teach the whole art of "grammar, composition, and rhetoric (!)"

Affixes in their Origin and Application, exhibiting the Etymologic Structure of English Words. By S. S. HALDEMAN. Revised Edition. 12mo. pp. 292. Philadelphia: E. H. Butler & Co. 1871.

ETYMOLOGICAL analysis is of late receiving increased attention among our educators, which we regard as an encouraging symptom of improvement. There is certainly no more important branch of study, forming as it does the very basis of a thorough education. Our textbooks in etymology are generally meagre and unsatisfactory, and, in most instances, incorrect. From a careful examination of this work we are persuaded that the compiler was well qualified for his task, and that he has produced a hand-book which may be regarded as a reliable guide. The dictionaries in general use are incomplete in their etymology, in many cases not going back to the original roots of words, and scarcely ever attempting a thorough exhibition of radicals and affixes.

The scope of this work does not permit a complete elucidation of the

English language, the plan not comprehending an account of root-words. Yet it furnishes such a knowledge of the structure of our tongue as will enable the student to get a good start in his endeavors to master its principles. Unlike many treatises which profess to teach etymology, this does not ignore the importance of a thorough knowledge of the languages from which our vernacular is principally derived. At the same time Prof. Haldeman insists that this, as a distinct branch, should have a place with or preceding classical studies.

"Instead of allowing a little knowledge of derivation to be the accidental result of the study of Greek and Latin, principles of etymology should be mastered first, or be studied simultaneously with Greek and Latin, as the proper basis for the study of language in general."—(p. 12.)

We agree that these studies may, in most cases, be pursued simultaneously, yet in many instances the ancient languages are commenced, and profitably, at a period when the pupil would be unable to master a work like this, unless under the most competent instructors. Still, we heartily concur with Prof. Haldeman in his declaration that "*It is an error* to suppose that those who have not studied Latin and Greek can acquire the power of analysing words from a dictionary; and that those who learn those languages get at the same time a competent knowledge of etymology."—(*ib.*)

The author declares his opinion, that "there are not three hundred roots in any language" (p. 13), yet in Worcester's dictionary we are presented with one hundred and four thousand. A thorough knowledge of roots and affixes, and the methods of combining them, is the first, and a very considerable step to a knowledge of the language. This knowledge may be obtained in a comparatively short period if scientifically presented, as is the case with a portion of it in this work.

Prof. Haldeman gives a concise summary of the etymological principles of the Greek and Latin languages, as the more important portion of the basis of our own. Then follows a short treatise upon grammar that brings him to a consideration of affixes to which the work is chiefly devoted. Next comes a detailed account of prefixes, and derivative words under each, with an alphabetical list at the end. Suffixes are treated in the same manner. Some pages are given of examples in the etymological analysis of words, then a vocabulary of Latin and Greek originals of English derivatives. An alphabetical list of illustrative words and a list of suffixes close the work.

We can give no idea, in the limits of a notice of this kind, of the amount of scholarly research displayed by the author of this book, of his evidently excellent understanding of his subject, and his scientific manner of treatment. Concerning the prefixes *in*, *un*, for example, he traces them through the Zend, Welsh, Gaelic, Irish, German, Coptic, Hebrew, Russian, Arabic, Bohemian, Polish, Gothic, Saxon, Swedish,

Danish, Belgian, Hindoo, and Latin languages.—(p. 71.) Many valuable philological facts and suggestions are scattered through the volume, making it something more than an elementary text-book upon the affixes of the English language. In short, it is a valuable work of reference as well as an excellent manual for the student.

College for Women in the City of New York.

We have read with much interest a pamphlet bearing this title, which gives a condensed report of a meeting held in the chapel of Rutgers Female College, on the evening of the 16th of January last, in response to a numerously-signed appeal for the endowment of a College for women in the city of New York. Although unable to be present ourselves, it afforded us pleasure to learn that the meeting was attended by many of our most prominent citizens—men of intelligence, wealth, and influence.

In opening the proceedings, Dr. Pierce, president of Rutgers, very pertinently and forcibly remarked that, "in this state there are sixteen colleges for young men with two hundred professors and over $15,000,000 in endowments and property, as against four colleges for young women with $1,000,000 in endowment and property." Most heartily do we agree with the doctor that this is an injustice to woman which ought not to be allowed to continue; for, if we have sometimes criticised female colleges and female universities, far from having been impelled to do so by any hostility to the thorough education of women, our sincere motive was to contribute to that thoroughness, so far as it was in our power to do so, by showing that the heads of such institutions require very different qualifications from pretension, vanity, and arrogance, with or without avarice.

We have never made any such criticisms on Rutgers Female College; on the contrary, whenever we have spoken of it we have used no other language than that of approbation, feeling that if it was not all that could be wished, it was all that could be fairly expected in view of the fact that it is impossible to render a college for either men or women fully worthy of the name without a liberal endowment. To this we need hardly add that we wish entire success to the appeal of Rutgers Female College, its patrons, and friends.

Were it possible to unite the representative female schools, academies, and institutes of New York and vicinity, to whose thorough and noble work we have borne testimony, from time to time, in these pages, so that they might form a university on the plan of the universities of England, France, and Germany, none would rejoice more heartily than we, for then we should be sure that the institution so-called was real. As it is we can only wish that all may be appreciated and encouraged by the public as their respective merits so eminently deserve.

APPENDIX.—INSURANCE: GOOD, BAD, AND INDIFFERENT.

Annual Statements of Insurance Companies, with various other Documents more or less reliable and otherwise. New York, Hartford, Boston, and Philadelphia. 1871.

THE most exciting event that has transpired in the insurance world since our last, is the failure of the Farmers' and Mechanics' Life; but our readers are aware that if we felt any surprise in regard to that institution it was that it had continued to exist even for so brief a period. Now that it is gone, however, there is no need that we should trample on the dead; it is better that we direct our attention to the scores of other companies whose demise may be expected almost any day. All we need say of the defunct Farmers' and Mechanics' Life is, that it seems to us that something better ought to have been done for its late policy-holders than to hand them over to another concern called the Empire Mutual.

The latter may be a very sound and reliable institution, although so many call it the Vampire Mutual that we have been led to suppose, ourselves, that the latter was its proper name, and we have designated it accordingly more than once in these pages. Probably the vampire has been confounded in the public mind with the vulture, the latter being, it seems, the chosen emblem of the company, for we see it occupying a prominent place, and nearly as large as life, in all its public documents.

It is but fair, however, to remember that naturalists give that interesting bird different names, viz.: *Vultur aura.* (Linn.), Turkey-Buzzard (Catesby), Aquiline Vulture (Kerr), Vulturine Eagle (Willoughby), Sacred Egypte. (Buffon), Carrion Crow (Sloane), Carrion Vulture (Latham), etc. But all agree in attributing to it the most insatiable rapacity with certain other characteristics. Among the latter Buffon ranks the following: "They never kill prey from choice, but, in general, *devour only such animals as are either dying, or found dead and putrid.* The sense of smelling is so exquisite that they are able to scent a body *to the distance of many miles.*" Mr. Bingley, the English naturalist, tells us that they emit an odor themselves which is by no means agreeable Describing the experience of a traveller in South America, he gives the following illustration: "Getting near a large collection of them he let fly among them, and killed several; but when he came to seize his game he was *miserably disappointed* in finding that they were not turkeys; and their stench was (to add still more to his chagrin) almost insupportable."* But they have one other characteristic which it may be well to remember. "They are so little alarmed at mankind," says Cuvier, "that they will not quit the places they frequent, although they are fired at with a

* Bingley's *Animal Biography*, vol. ii. p. 183.

gun, but after a short flight return immediately. If one of them is killed, *the rest surround and devour it.*"*

Whether a bird possessing these characteristics be a fitting emblem for the Empire Mutual, it is not for us to say; but whether it is or not, we think it will be admitted, by any one who has devoted intelligent, impartial attention to the subject, that there are many companies that could not select any figure or motto more truly characteristic of them. Thus, for example, not to mention the characteristic of only devouring "such animals as are either dead or dying" (a description given by some naturalists of the ignorant and credulous among the genus *homo*), there are many policy-holders who will be quite as "miserably disappointed" when their policies become due as the huntsman was when he mistook the vultures for turkeys. And if, when one of the vultures is dead "the rest surround and devour it," do not the class of companies we are now alluding to do the same, as far as possible?

If the disposition made of the carcass of the Farmers' and Mechanics' Life be not of the "devouring kind," why has it not been transferred to some skilful experienced and straightforward anatomists who attend to nothing else but their profession, and accordingly know what to throw away and what to preserve? Is it because the president of the Empire Mutual is one of the interesting tribe who manage to have themselves sent to Albany for a season by credulous villagers that the policy-holders of the Farmers' and Mechanics' Life have been done for in this manner? If not, why have they not been placed under the protection of some such New York company as the Knickerbocker, the Manhattan, the Equitable, the National, or the Security? We have omitted to include the Continental in this list, not because its protection would not be as safe as that of the best—for we believe none would be safer—but because it is comparatively young. It is, however, three years older than the Empire Mutual; the latter not having commenced the business of insuring until the year before last (1869).

But everybody knows that politicians sometimes make great progress in financial affairs, and that at all times they are very magnanimous. This may serve, perhaps, to explain certain propositions addressed by the Empire Mutual to the receiver of the defunct institution, the pith of which is contained in the following:

"1. The Empire will assume the liabilities existing under any policies in force, heretofore issued by said company, including death-claims arising thereunder, *for the consideration of 97,500 dollars.*"

The receiver thinks this quite a handsome offer; it seems the superintendent of the insurance department regards it in the same light, for a bargain is struck. Accordingly, as much of the deposit of the Farmers' and Mechanics'—which it had to make at Albany before

* See also Bingley's *Animal Biography*, p. 187.

could do any business—as was necessary to make up the $97,500 s been handed over to the Empire Mutual. It may be that the ınsferred policy-holders are now entirely safe, and that the protection ey are to receive will have no analogy to that afforded by vulture, rkey-buzzard, or carrion crow; and yet, we must confess, we have some ch apprehension as that of a certain Italian underwriter, that old sores e apt to break out anew in spite of the most skilful doctors.

"Pauca tamen suberunt *prisca vestigia fraudis*."*

But let what may happen to the widows and orphans of the Great estern Mutual, the Farmers' and Mechanics' Life, and the many her concerns like them that still linger on, but whose early demise is evitable, we see no reason for any general panic among those who ish to make a suitable provision for their widows and orphans. It ould be as absurd and foolish to condemn all companies because me companies fail, as it would to condemn all houses because some ouses fall. There is scarcely a day but we hear of houses tumbling own in New York; certainly not a week passes without such an currence taking place in this city, not to mention Boston, Philadel- ıia, Baltimore, etc. Not only are large sums of money lost in this ay; but sometimes valuable lives are lost, also. Yet we hear of no ne person refusing to live in a house, even in New York, where a larger ımber topple down than anywhere else. The most timid as well as e most thoughtless cannot but see that, although there are a large ımber of rickety houses, there are some houses that are not rickety. he difference between the wise and the foolish in this case is, that e former examine the foundation, the walls and ceilings, before buy- g, or hiring, whereas the only questions of the later are "Is it cheap?" Does it look nice?" Those who examine the foundation, the walls, ıd the ceilings, and are willing to pay a little more for a good article ıan for a bad or indifferent one, are seldom or never endangered in fe or property in this way. And it will be admitted that it is nothing ew for us to say that it is just the same in insuring one's life. We ave not only pointed out, time after time, the necessity of examining ıe foundation and walls of insurance structures; we have also in- mated the advisability of making some researches into the character f their architects—adding that when the result is satisfactory the olicy is cheap, let it cost what it may; whereas, if the result is not ıtisfactory, the policy is dear at any price.

All sorts of companies—the very worst as well as the very best—have ıeir distinct types in New York, but it must be admitted that the latter ass form but a very small minority—the doubtful, the indifferent, and ıe decidedly bad having a large preponderance in point of numbers.

* *Bucol. Ecl.* iv. v. 31.

In general we have taken much more pains to enable our readers to avoid the malefactors than to find the benefactors; but we think in times of panic the opposite is the fairer course, and accordingly we do not hesitate to pursue it. When we make criticisms our object in doing so is to put the unwary on their guard against imposition and fraud; when we criticise insurance companies we have no more idea of condemning all insurance than we have in criticising books to condemn all books, for one course would be as absurd and thoughtless as the other. It is much more agreeable to us to point out the merits of a good book than to expose the defects of a bad one; but did we fail to do the latter because it is unpleasant we could hardly regard ourselves as reviewers. Supposing we should enter a village in which a dozen or even a score of persons have suffered so much injury from reading bad books that all the villagers have begun to shake their heads as to whether all book-reading is not dangerous work, would it be proper for us to say to those honest but simple people: You are right, books are not what they are represented to be by interested parties? They may save somebody, some time, but in general they do more harm than good. The safest way is to have nothing to do with them. People that have nothing else to do may rail at ignorance as they will, but it is much better to be content with it than to spend one's money and time in search of knowledge and run the risk of not finding it after all. It will be readily admitted that this would be a spurious philosophy, and that some such language as the following would be more appropriate and more useful: Before you invest your money and time in books try to learn something about their character. If you cannot tell yourself whether they are good or bad, by glancing at them, ask the opinion of some honest neighbor who is supposed to have skill in that sort of thing. If you are obliged to depend on your own judgment you will be pretty safe in believing that those books that have the most extensive and high-sounding names and that promise most in their title-pages are in general the most worthless. But when you get the good article do not consider it dear if you have to pay a little more for it than for the bad, although this is seldom the case—the spurious costing in general quite as much as the genuine, if not more.

These remarks will remind many of our readers, as they do ourselves, of companies which cannot be seriously affected by the failures of a few concerns that never had any real foundation, and we will refer to them as they happen to occur to us, occasionally presenting a contrast, partly for the sake of illustration and partly to enable those willing to profit by the good example of their neighbors to do so. As we have neither the time nor the taste for tedious descriptions, we congratulate ourselves that the classes which it is our privilege to address do not need such things. We turn to statistical tables before us which have evidently

been carefully prepared from official returns, and find that a number of companies sufficient to insure all who want to be insured, far from evincing any diminution of vigor resulting from panic or any other cause, exhibit increased vigor and vitality. The first we happen to glance at is the Knickerbocker, and we learn that the premiums which it received during the past year amounted to over four millions ($4,286,936), its total income amounting to nearly five millions ($4,743,296). It has now a total of 20,517 policies in force, insuring more than sixty-one and a half millions ($61,521,564), while its gross assets exceed seven millions ($7,319,992), after paying nearly half a million ($415,174) to policy-holders during the past year.

Turning to the record of the Manhattan, and viewing it under other bearings, we find results equally significant and satisfactory. The following are a few of the items: The claims paid by death in 1870 amount to over half a million ($530,000). Of this sum, eighty-two widows received $296,420; eleven orphans, $39,119; ten assignees, $51,896. According to the sworn statement for the same year of its officers, men whose integrity has never been questioned, the assets of the company amount to nearly seven millions ($6,924,116.39). If to this the fact be added that within the same period; which may be regarded as forming a crisis in the business of insurance, over $600,000 was returned to policy-holders in dividends and purchase of policies, it will be seen that the Manhattan fully maintains its solid and honorable prestige.

The New York National Life is always worthy of having emanated from the Manhattan. Judging from the progress of the past three years the offspring will soon be as robust and vigorous as the parent. But the officers of the former as well as those of the latter are veterans in insurance; and they may also be compared to each other in such useful acquirements and qualities as intelligence, talent, shrewdness, modesty, and those amenities of life which no amount of wealth can compensate for. Next to the president of the New England Mutual the president of the New York National is the most able writer on life insurance whom the fraternity can boast of. To this we need only add, so far as the latter is concerned, that the National has now an income of over half a million ($506,854). Its assets at the beginning of the year approximated pretty closely to a million) $879,348), after paying losses to the amount of $67,880, together with $82,184 dividends to policy-holders.

Another company which is ranked by common consent among the same straightforward solid class, is the Security Life; and a few of the official figures will show that it continues to prosper and prove a benefactor accordingly. Thus, its total premiums in 1870 amounted to nearly a million and a half ($1,476,402.97); gross income, $592,465.46; dividends to policy-holders, $172,646.14; dividends to stockholders, $12,288.88. The sum paid for losses during the year, including dividend additions, amounted to $368,762.45. This was a pretty large amount, but it left gross assets, in-

cluding capital, to begin the present year with, amounting to nearly three millions ($2,964,931.38). The operations of companies like these form the best antidote against panics.

If we cannot say the same, or anything of the kind, of certain other New York companies, it is because their plans are different; because their ideas, if they can be said to have any, are erroneous. This is true, for example, of the New York Life, which used to do quite well until it began to encourage suicide, as we have shown on former occasions. Although its white marble building is a very imposing edifice, it has not so much dazzled the eyes of the public as to conceal from those wishing to have their lives insured the error which forms its basis. As a New York alderman, its president understood his business very well, and we believe its vice-president was, and perhaps is, equally skilful as a member of the "collective wisdom" of Yonkers. But to be a politician of either of these grades, and to manage a life company so that it may continue to inspire public confidence, are very different things.

Even to turn saint and occupy one's time chiefly in sending the Bible to the heathen, and other pious works of a kindred character, will only attract customers for a while, although that plan too may be fortified by white marble, to render it somewhat more imposing than it would otherwise be in the minds of most worldly people. The manager of the Mutual Life could bear testimony to all this if in a communicative mood; that gentleman could also inform all whom it may concern, that even the process of official whitewashing is only temporary in its effects. Like gin, or small beer, it stimulates to a certain extent, but the reaction that follows in one case as well as in the other, is not at all agreeable.

Be this as it may, we think the plan of the Equitable is much more durable in its beneficial results. The chief manager of this company is not dazzled by success; it is generally admitted that he is not in the least demoralized by the money of the policy-holders, but that he is as free from arrogance and pomposity, with millions at his command, as he was when he counted his capital by hundreds, or even tens. In short, both himself and his colleagues have minds strong enough to bear prosperity, and that the public appreciate the Equitable accordingly, as compared with its arrogant and pompous rivals, may be seen from the following little table which we improvise from the official reports before us:

BUSINESS OF 1870.

Commenced Business.	NAME.	Amount Insured.
1859	Equitable, New York	40,205,799
1843	Mutual, New York	33,458,217
1845	New York Life, New York	27,141,995

We do not pretend that table-making is exactly our forte; but we think that just made will be found useful if not handsome. At all events

let the reader examine it carefully; if he would then turn to some of our back numbers he would find whether our predictions are not beginning to prove as true in these cases as they have proved already in those of the Great Western, the Farmers' and Mechanics', etc. But let us construct one more little table. It may be remembered that soon after the Continental Life commenced business, we remarked that there were those living who would see it outstrip the Mutual Life and the New York Life. No doubt many regarded this as at best an exaggerated statement; but although we have never had anything to do with insurance further than to discuss its principles and to criticise some of its would-be high priests, there are two things connected with it which we have pretty thoroughly in our youth, namely, the science of numbers and the science of logic. These convinced us that certain phenomena would present themselves in due time. Now, taking the number of policies issued by the Mutual Life, the New York Life, and the Continental Life, respectively, in 1870, as a criterion of the public confidence, what do we learn from the following?

Commenced Business.	NAME.	Policies Issued.
1866	Continental, New York	12,537
1843	Mutual, New York	12,493
1845	New York, New York	9,925

Here we find Mr. Lawrence and Mr. Rogers at the head, and Alderman Franklin and Councilman Beers at the foot, Mr. Winston occupying a sort of half-way position, which we must confess reminds us as much of purgatory as another place. If these relative conditions be not in accordance with Newton's law of gravitation, it is certain that they are the results of a law which is equally sure in its operation. The assets of the Continental amounted at the beginning of the year to over four and a half millions ($4,505,260), after paying losses to the amount of $384,778, besides $199,551 paid as dividends to policy-holders.

In our December (last) number, we expressed some doubts as to the stability of the United States Life of this city. Our readers are aware that those doubts had been awakened prior to the connection with the company of its present chief officer. The only fault we had to find with Mr. De Witt was that it seemed to us that he had taken an injudicious step in withdrawing from a company like the Phœnix Mutual of Hartford, in whose service he had done so much good for himself, the public, and his employers, and thereby gained such an enviable reputation as an energetic and successful underwriter. Judging from the character of the United States Life under its former manager, or rather mismanager, we thought this wrong, and did not hesitate to say so. But having been satisfied that the circumstances are entirely changed under the new president, it affords us pleasure to say that we no longer entertain any doubt as to either the solidity or the integrity of the company. Convincing evidence

has been presented to us of the fact that Mr. De Witt has infused into it new life and vigor. We make this statement without being impelled by any threat, or any consideration whatever—simply because we believe fairness and justice require it. If we saw any reason to alter our opinion to-morrow we should hesitate as little to say so; but we have full confidence that Mr. De Witt will continue to maintain as the president of the United States the honorable character which it is admitted by all he had fairly won as one of the principal agents of the Phœnix Mutual.

Hartford is a wonderful little city for underwriting. Next to New York it may justly be regarded as the stronghold of insurance on this continent. As for Boston, it is cast far into the shade, with the exception that the New England Mutual Life has no superior anywhere; for the rest, Hartford does far more insurance business, and contains more insurance capital—more real insurance wealth—than all the New England states put together. Unhappily, it is true that it is also distinguished for harboring a larger number of the rapacious tribe than any other city in the world of equal population. But it is fair to remember that a much more ancient and more reliable naturalist than either Buffon or Pliny has warned mankind that "where the carcass is there will the vultures be gathered." But although the latter may not be distinguishable by their beaks, their claws, or their peculiar odor, it requires but very little study of their habits of life—especially their peculiar mode of decoying and seizing their prey—to determine their character. Accordingly, they are seldom able to secure any better game than owls, geese, bantams, and goslings; but these are so abundant throughout the rich valleys of the Connecticut that even the most voracious and ill-favored of the tribe sometimes grow fat and sleek.

Among the solid companies of Hartford that are subject to no unseemly perturbations, and with which the child may deal as safely as its parent, the Phœnix Mutual undoubtedly occupies the first rank. There are companies that boast larger assets and the issue of a greater number of policies, but none whose real assets or policies represent more substantial genuine worth in proportion to the just claims that can be made on them. As it is pleasant to us to note the progress of an institution of this character, we cull a few figures from its last annual report (Jan. 1, 1871). It must be admitted that assets which exceed six millions ($6,099,056.61) make a handsome pile. Nor is it a small income which approximates to three millions ($2,827,638.16), and leaves a surplus over liabilities of more than a million and a half ($1,761,147.16). The number of policies issued in 1870 is over nine thousand (9,065); the number in force, 24,576. The amount paid in dividends during the same year is nearly half a million ($498,751.14); the amount paid for losses by death over half a million ($500,466.11). It is almost superfluous to say that a company presenting such a record as this, without any clap-

trap or display, is intelligently and honestly managed; it is especially needless in the present case, as our readers know, already, how implicit and unwavering is our confidence in the officers of the Phœnix Mutual.

Of a similar character in many respects is the Charter Oak Life. This company is not so well known to our readers as the Phœnix, but like the latter it deserves to be well known. Its president had gained honorable distinction and wealth as a lawyer before he became an underwriter, having practised at the bar for fifteen years; and it was for his well-known abilities and high character for integrity he was chosen to be the manager and guide of this company. Although now hoary with age, he is rarely if ever absent from his desk during business hours, and the most thoughtless could hardly observe his pale intellectual face and venerable aspect for a moment without feeling that he was in the presence of one who would not wrong the widow or the orphan. The Charter Oak has a new marble building nearly ready for occupation, which rivals, both in extent and architectural beauty, some of the finest similar edifices that adorn Broadway, New York; at the same time its pile of assets exceeds eight millions ($8,328,789), and its income is nearly four millions and a half ($4,491,025).

Far be it from us to deny that the Ætna Life is also a substantial and honorable company. In all our criticisms, extending over a period of eleven years, we have never spoken of it in any other language than that of approbation, although we have not always been able to agree with its able chief manager in certain of his views on Laplace's *Essai philosophique sur les probabilités*. This reminds us that so far as the relative powers exercised by the presidents and secretaries of insurance companies are concerned they are very similar to man and wife; for, as the stronger mind rules in the latter case, so does it in the former. But as we should be sorry to reproach the honest and amiable husband who allows himself to be ruled by his better half, neither would we reproach the honest and sensible insurance presidents who commit the reins of government to their more philosophical secretaries. Yet we must confess that we know but one of the latter who, when entrusted with the helm, acquit themselves in general so well as Mr. Endors.* Indeed, were it not for his erroneous views on what we regard as one of the best points in Laplace's insurance theory, we should compare him to the president of the New England Mutual, the president of the Knickerbocker, the vice-president of the Equitable, and the vice-president of the Security, and admit that he was worthy of comparison with the best of them. Nay, we do so now in all essential particulars with the sole exception of that alluded to. That he does excellent work,

* It is but fair to say that the exception we allude to is Mr. J. L. Halsey of the Manhattan. When the president and vice-president have to visit the agencies Mr. Halsey is invested with full powers; but in every instance he has elicited the entire approbation both of his colleagues and the policy-holders.

we cheerfully admit. We see that the assets of the Ætna amounted at the beginning of the present year to over fifteen millions ($15,120,686.12), and that its income for 1870 attained the handsome figure of over six millions ($6,201,069), while we have before us a list of claims paid by it since its organization which extends to *several yards.*

The "probabilities" of Laplace evidently do not please the Traveller's Insurance Company in any point, either in its life or accident department. However, Mr. Batterson does not reject all the theories of that philosopher. It may be that he has not read his essay on the *moon* (*Sur l'Équitation séculaire de la lune*); but to us he seems to understand much more about lunar phenomena than he does about such sublunary affairs as the rights of widows or orphans, or those of persons maimed or rendered otherwise helpless by "accident." What appears most probable from his "statements" is that he has been studying Plutarch "On the Face appearing within the orb of the Moon." It was a disputed point among the ancients whether this face be masculine or feminine, but Agesianax decided the point as follows:

> "With shining fire it circled does appear,
> And in the midst is seen the visage clear
> Of a young maid, whose eyes more gray than blue,
> Her *brow and cheeks a blushing red do show.*"

We do not know that Mr. Batterson ever blushes even when making his "statements" or resisting claims; at all events, we think we can recommend him the lines just quoted as a motto to be placed at the head of every policy he issues.

Some time ago the Hartford Life and Annuity was managed on principles somewhat similar to those of the Traveller's, but with far less energy and ability than the latter; for most cheerfully do we admit that Mr. Batterson is "smart," and perhaps there are none of his friends who regret more than we that his early education was neglected. Had he been only instructed in Paley's Moral Philosophy at the proper time, especially in those chapters which explain the difference between *meum* and *tuum*, and then received some lectures on Chesterfield's Principles of Politeness, we do not doubt that he would have proved as respectable and successful an underwriter as any in Hartford, or elsewhere. But even in his rough, neglected state he is vastly superior, both morally and intellectually, to any of the former managers of the Hartford Life and Annuity; nay, his company was as much superior to this as Mr. Batterson's tombstones are to those of ordinary stone-cutters. But these relative distinctions no longer exist. The Hartford Life and Annuity is now managed by men of ability and integrity who are entitled to the confidence of the public, and who, it may be added, enjoy the confidence of all who know them. This is particularly true of the president, Mr. Wareham Griswold, who

combines the business tact of a successful merchant with the amenity and understanding of an educated man.

There is a Continental Life company in Hartford as well as in New York; but the difference between the twain is immense. The latter is as much superior to the former as the Phœnix is to the North America, the Charter Oak to the Globe Mutual, or the Ætna to the Brooklyn. If any one company could be said to be the shadow of another, this is, undoubtedly, a case in point. We do not mean, however, that there is anything dishonest about the Hartford Continental; nor do we rank its officers among the rapacious tribe described at the beginning of our article. They probably mean very well; but they lack ideas, things more or less useful in all respectable kinds of business, but which are essential to honorable success in insurance. If they could only borrow a few from Mr. Justus Lawrence, it would be worth their while, if they have the money, to pay a handsome bonus for them. But whatever criticisms we make on Hartford underwriters they do not prevent us from acknowledging, very cheerfully—because truth and justice require it—that upon the whole they constitute a fraternity which will compare favorably, both in integrity and intelligence, with that of any other city in the world.

We always derive both pleasure and profit from the perusal of the Annual Report of the New England Mutual Life to its members. It is written by an educated man, who combines the experience of one of the oldest underwriters in America with literary talent of a high order. That now before us, dated January 16, 1871, possesses unusual interest from the various important topics which it freely discusses—an interest by no means confined to those to whom it is directly addressed. Thus, for example, it were well that the managers of the New York Life would read the chapter on "Deaths from self destruction,"—that is, if their avarice would allow them to profit by it, which we fear is doubtful. Those who pretend to compare their concerns to savings banks should read the chapter entitled, "Assessment of expenses upon endowment policies." We would recommend it particularly to such "institutions" as the Globe Mutual, American Tontine, North America Life, Economical Mutual, Berkshire Life, Standard Life, Excelsior Life, etc. Were it not that our article has already attained larger dimensions than we had prescribed for it, we should be glad to extract several passages for the benefit of all policy-holders. As it is, we can only make room for a small fragment, and we think this had better be one like the following, which exhibits the results of a judicious system efficiently and faithfully carried out:

"The operations of the year ending December 31, 1870, have resulted in an accumulation to the funds of the Company of $1,575,858.18, after paying and providing for claims under policies to the amount of $781,200, of which sum, $84,200, not yet due, will be settled within the coming ninety days. Since the last annual report, insurance to the amount of $8,979,361 has been effected upon 3,563 lives, in amounts varying from $100 to $20,000, the average of each policy being $2,530. No bills of expenses or demands of any nature are outstanding not provided for in the accumulated funds."

Facts like these are the best arguments in favor of life insurance. There is nothing sensational in them; they derive their force only from their truthfulness—a quality which is never boisterous or high-sounding; and to nothing more than to insurance does the comparison apply: "Where the water sounds the less, the river runs the deeper."

The president of the Mutual Benefit of Newark is another veteran underwriter, in whose reports we always find good, honest thoughts. That for last year is now before us, and it is in every respect a satisfactory document. But the Mutual Benefit has one characteristic which gives the New England Mutual a decided advantage over it: we allude to the habit which its directors have of dictating to its president, so as to prevent him from carrying out those ideas which are the results of long experience and careful, intelligent reflection. This intermeddling causes perturbations from which the Boston institution is entirely free. We do not say that the policy-holders suffer from them, for this would be unjust, but that the company is retarded in its progress by them we are convinced. Doubtless our criticism on the subject will displease the president quite as much as the directors, but although we have sincere respect and esteem for the former, we cannot, on that account, refrain from the expression of an opinion, which may possibly have the effect of causing even the thoughtless to think. As for the treatment which the Mutual Benefit gives its policy-holders, it is always good.

The New Jersey Mutual, which has also its head-quarters at Newark, bids fair to prove a successful institution. The recent ordeal of official examination, which it has voluntarily passed through, has done it good by proving its soundness. The Anchor Life is another Jersey Company which promised well at the outset, but whether it has the necessary weight of metal to secure the safety of crew and passengers when the storm comes, we cannot vouch for any more definitely than to hope for the best.

Speaking of Newark reminds us that Albany has a company which, although very modest and unobtrusive, is entitled to respectful attention—we mean the Atlantic Mutual, which is managed by men of well-known standing, like Hon. Robert H. Pruyn, Mr. James Hendrick, president Hope Bank, etc. It appears from the official tables before us that the receipts of the Atlantic Mutual during the past year amounted to nearly half a million ($426,646.13), that it paid claims by death to the amount of $61,041, and that its assets at the beginning of the present year approximated pretty closely to a million ($786,310.84). Need we say that there are several metropolitan companies which make an immense noise that could not show such a record without indulging in considerable legerdemain?

This reminds us, by contrast, that we had almost forgotten the modest, but sure-going and safe Asbury Life, which, although it did not commence business until 1868, has now an income of $208.145, with assets amounting to $347.635.

Fire insurance, as generally carried on, is too exclusively a business affair for our taste. Hence it is that we have comparatively little to say upon it, confining our remarks in general to the operations of those companies which, in our opinion, are either great in good or great in evil. As to the comparative honesty and fair dealing of fire and life underwriters, we think the former include quite as many malefactors in proportion to their numbers as the latter, if not a small percentage more—a fact which we may take the liberty of illustrating before long.

For the present we can only say that, from all appearances, both internal and external, those whose policies we have ourselves, as a guarantee for all the worldly goods, real and personal, we possess—including our books, ancient and modern, together with all the copies we possess of this journal, from the first issued to that containing these remarks—continue perfectly sound and solid—namely, the Washington, the Hope, and the Hanover. That we regard each of these as belonging to the exemplary class of fire underwriters, although there are many companies that boast larger assets and make louder pretensions in all things, the circumstance just mentioned is, we think, sufficient proof.

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